

# AGRICULTURAL OUTLOOK

June 1990

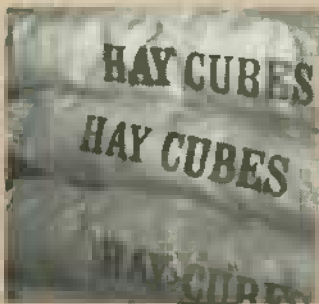
Economic Research Service  
United States Department of Agriculture

**Focus  
on Sugar  
Europe  
& Brazil**

# AGRICULTURAL OUTLOOK

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## News of 1990/91 Crop Forecasts, Land Values, Food Prices, and the General Economic Outlook

**D**uring 1990, farmland values in the U.S. are expected to rise 3 to 4 percent. The forecast incorporates expectations of near-record net farm income, slightly lower interest and inflation rates, and trends in farmland values.

However, weather, the looming 1990 farm bill, possible revisions in the capital gains tax, and the GATT trade liberalization talks all are uncertainties that will affect returns to land and expectations of land values over the next several years.

U.S. farmland values rose for the third consecutive year in 1989, but the 4-percent increase fell short of 1988's 6-percent gain. Because 1989's inflation rate was nearly 5 percent, real farmland values actually slipped slightly from a year earlier. Real values have been virtually flat since 1987.

USDA's first projections for the 1990/91 season show that world wheat output could set a record. U.S. wheat production could be the third highest ever. Improved weather and increased area account for the expected gains.

But, world wheat trade may post only a slight increase because output is forecast to rise in several large importing countries. Consequently, the U.S. average farm price is expected to slide to \$2.90-\$3.30 from \$3.71 a bushel in 1989/90, and stocks will go up.

World coarse grain output also is forecast to rise, although supplies will remain somewhat tight and trade may drop. With wheat prices softening relative to coarse grains, more wheat will be used to feed livestock. U.S. corn production is projected to go up, but use will increase more, and ending stocks could drift down. U.S. average farm prices for most coarse grains could remain firm.

For oilseeds, world output is expected to set a record, although U.S. soybean production will be almost the same as a year



earlier. The global rice crop and trade probably will be unchanged, but U.S. output could go up slightly.

Food prices in 1990 are expected to average 3 to 5 percent higher than in 1989. In the first quarter, the CPI for food jumped at an annual rate of 13.7 percent; the December freeze in Florida and Texas caused fruit and vegetable prices to spike. Another such shock is unlikely, and food prices probably will decline for the last three quarters of the year.

Fears that the economy would slide into a recession by early 1990 have dissipated. A moderate recovery in industrial production, continued employment growth, and an improving trade balance have substantially reduced the probability of a recession during the next 6 months.

Economic growth in January-March, though, was accompanied by the highest quarterly inflation in 8 years. Recent USDA research suggests the inflation surge will be temporary; inflation should average 3.5-4.5 percent for the next 12-18 months, and interest rates should be stable or fall slightly.

Beet sugar yields in Eastern Europe and the Soviet Union largely have been static since the 1940's, while yields in the EC and U.S. have trended up sharply. In light of recent reforms, if Eastern European beet producers could close half the gap between their yields and the EC's over the next decade, Eastern European output could rise by about half. This would enable the region to shift land to other crops and eliminate the need for sugar imports that now come from Cuba.

Beet prospects are more clouded in the Soviet Union, given the slower pace of reform there. If the Soviets could double their yields, they could sharply reduce imports of Cuban sugar. However, yields still would be one-third below those of the EC.

For Brazil, USDA forecasts steady cane sugar output of 7.5 million tons in 1990/91, despite strong world prices and excess domestic milling capacity. Next season's ethanol output, according to industry sources, is also expected to be flat.

The longer term outlook for the Brazilian sugar-ethanol complex is clouded as the Collor government struggles to put the economy on a market footing. Recently, Brazil has elected to export sugar to the U.S. to meet its quota commitment, and then import U.S. ethanol for its cars.

The Japanese closely link their food security to self-sufficiency in rice. Japan achieved self-sufficiency in rice in the late 1960's, but the nation now actually imports about 55 percent of its total food consumption. Government supports currently hold domestic rice prices five to seven times above world trading prices.

If Japan were to liberalize its rice market, and perhaps institute a more generous stocking policy, it could achieve a similar degree of food security at less than half the cost. Japan's consumers would reap almost the entire benefit.

## Agricultural Economy



### How Accurate Are USDA's Forecasts?

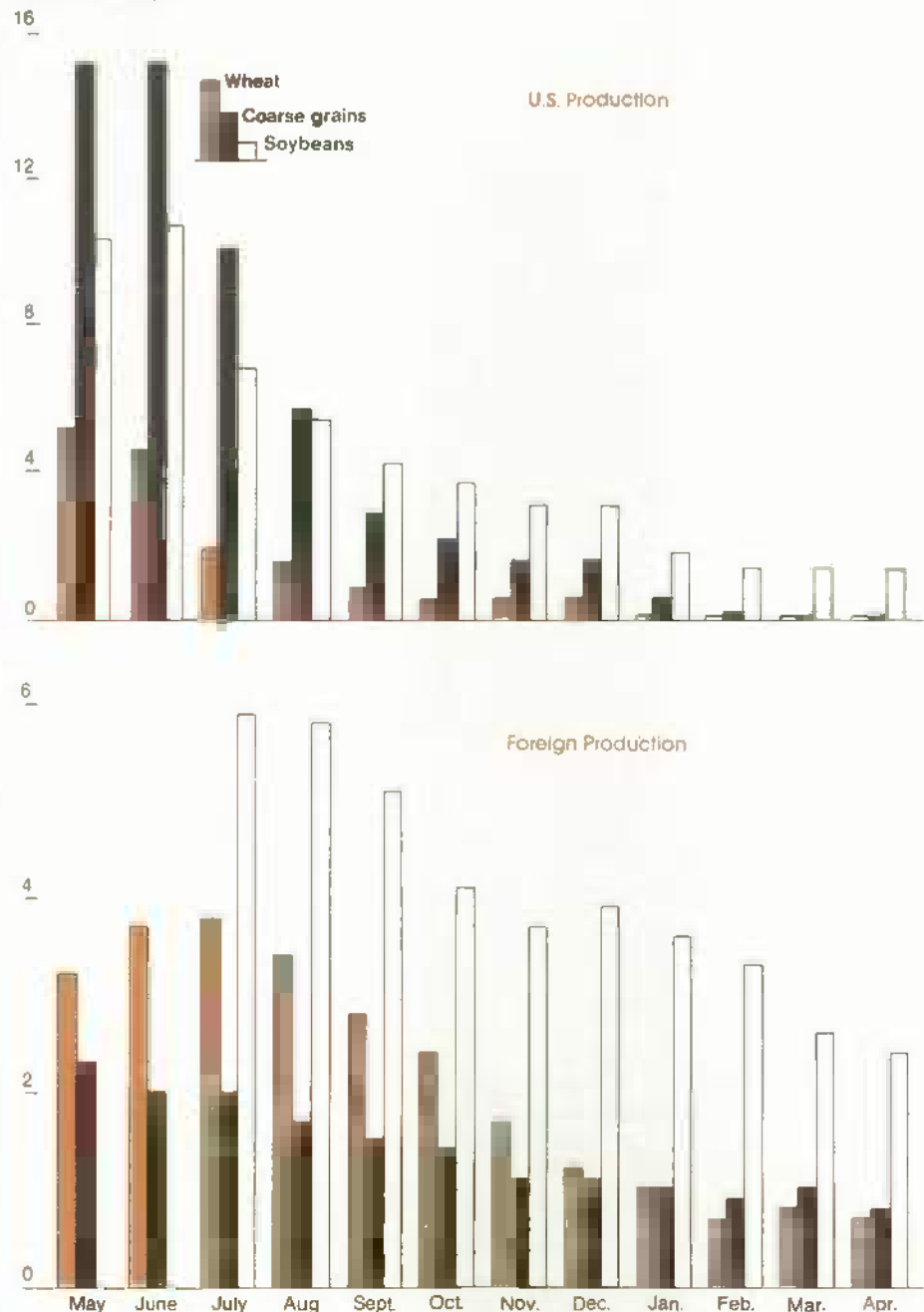
This issue of *Agricultural Outlook* presents and explains the Department of Agriculture's first estimates of 1990/91 global crop production, supply, and use. As with all forecasts, accuracy is critical. Averaged over 1981/82-89/90, USDA's first crop forecasts, which are released annually in early May, differ by 4.7 to 23.3 percent from actual U.S. production, and by 2.1 to 3.8 percent from actual output abroad.

The U.S. wheat production estimate has proven to be the most accurate of the domestic forecasts—within 4.7 percent of the crop's actual size. That's because more than three-quarters of the crop is winter wheat, and the harvest begins in late May. Unlike the other May projections, the winter wheat forecast draws on USDA surveys of actual area and expected yields.

For U.S. coarse grains, the May forecasts differ from the crop's actual size by an average 14.1 percent. The error rate for

#### USDA's Wheat Forecasts Tend To Be Most Accurate

Percent deviation\*



\*Average percent deviation from final. Difference between monthly forecasts and the final number, 1981/82-88/89 averages.

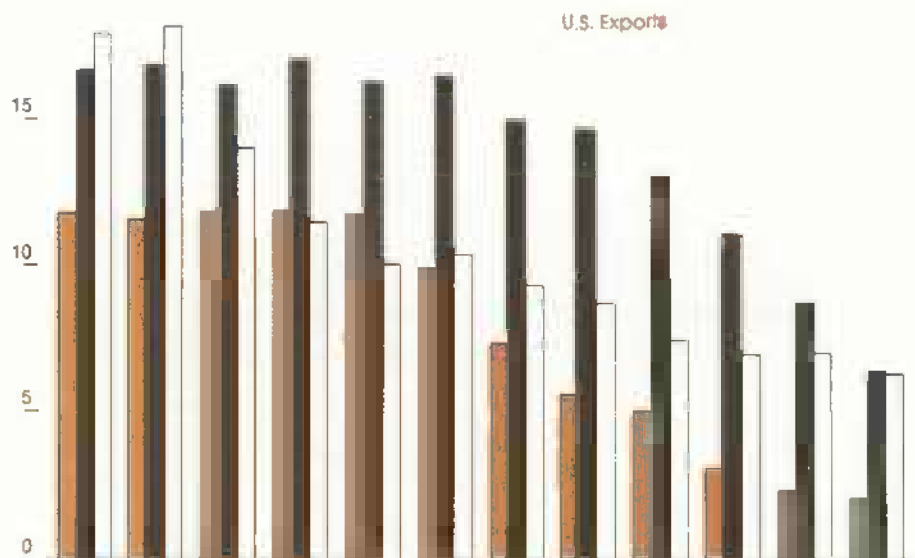
the U.S. soybean forecast is a bit lower, 9.2 percent. One reason for the differential between error rates is that, over the past 9 years, actual corn output has been twice as variable as soybean production.

Uneven weather during the last 9 years has made accurate forecasting difficult. Most recently, during the 1988 drought,

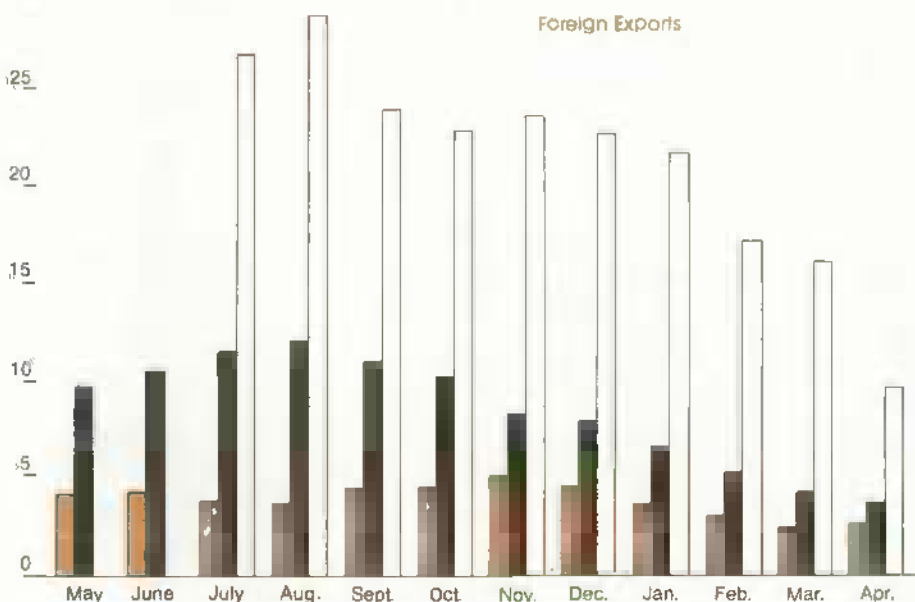
many observers criticized the department for being too conservative in estimating crop damage, yet the final numbers showed that USDA had overestimated the drought's impact.



## Agricultural Economy

Percent deviation\*  
20

30



individual estimates for nearly 150 countries. Country forecasts for rice, cotton, and oilseeds are not completed until July.

The U.S. production estimates appear to be relatively unbiased. During the last 9 years, the May U.S. crop estimates over-predicted and underpredicted about the same number of times.

But the record for the forecasts of foreign production is mixed. For coarse grains, the estimate was above the final in 7 of the past 9 years, while the cotton estimate was below the actual in 6 of the past 9.

### Forecasting Done By Consensus

The May forecasts of U.S. crop output and use are based on farmers' planting intentions, weather, trend yields, economic analysis, and judgement. Reports of agricultural attaches abroad, other foreign reports, USDA research, weather forecasts, and satellite imagery analysis underpin USDA's projections of foreign production and use.

The forecasts are updated monthly. The accompanying charts show that as the year progresses, accuracy improves dramatically. For example, the forecast error falls by 44 percent between the July and August estimates of U.S. coarse grain output. And, the improvement is no surprise.

The July estimates for U.S. wheat, barley, and oats are based on USDA surveys of area and prospective yields. For corn, soybeans, sorghum, rice, and cotton, the August estimates are the first to embody the survey results on expected yields.

People from all over USDA help to put together the forecasts. The National Agricultural Statistics Service runs the state-by-state surveys of area and expected yields, and puts out the survey-based U.S. production estimates.

Interagency committees, chaired by the World Agricultural Outlook Board, reach a consensus on forecasts of U.S. use and ending stocks; foreign production, use, and ending stocks; and trade flows. The

Forecasts of aggregate foreign output are generally closer to the mark than the forecasts of U.S. production. For example, the foreign wheat output estimate averaged within 2.9 percent of the final number during the past 9 years. The greater accuracy likely reflects offsetting errors;

there is always much diversity in weather and crop conditions around the globe.

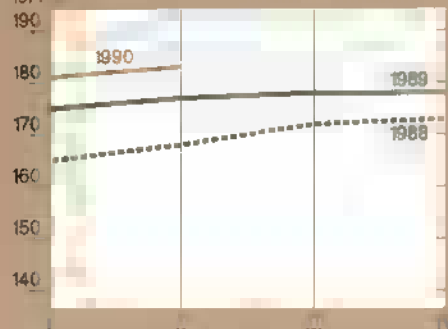
Aggregate foreign supply and use of wheat, coarse grains, rice, and cotton are estimated in May, while the first estimates for oilseeds follow in July. The aggregate May projections for foreign wheat and coarse grains are built up from

## Agricultural Economy

## Prime Indicators

Index of prices paid by farmers

1977 = 100

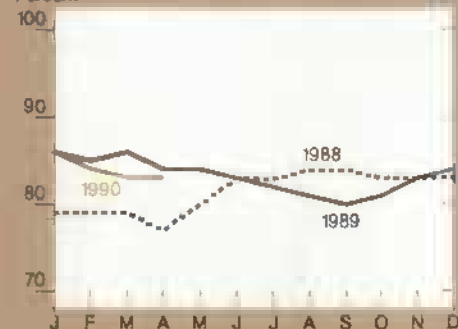
Index of prices received by farmers<sup>1</sup>

1977 = 100

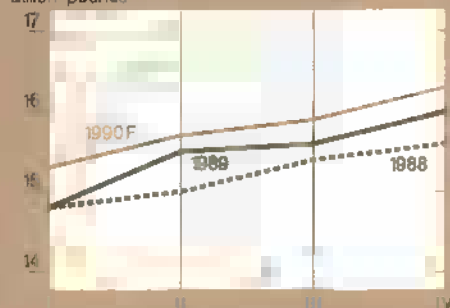


Ratio of prices received/prices paid

Percent

Total red meat & poultry production<sup>2</sup>

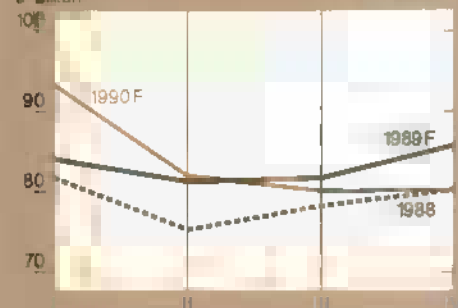
Billion pounds

Red meat & poultry consumption, per capita<sup>2,3</sup>

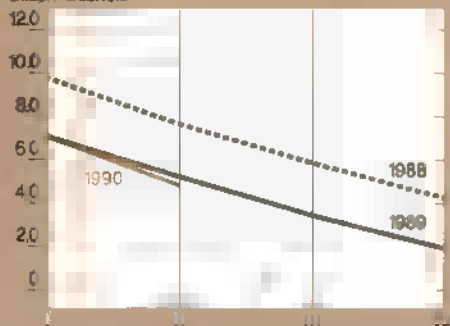
Pounds

Cash receipts from livestock & products<sup>4</sup>

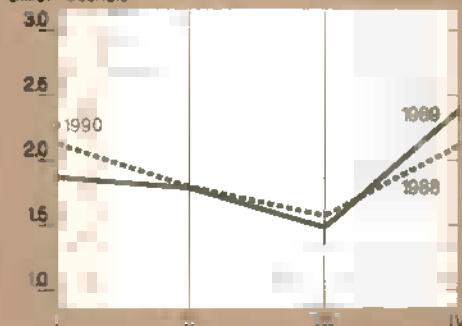
\$ billion

Corn beginning stocks<sup>5</sup>

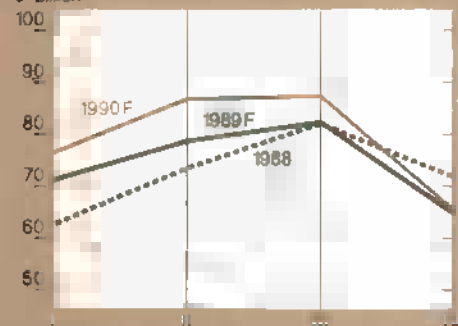
Billion bushels

Corn disappearance<sup>5</sup>

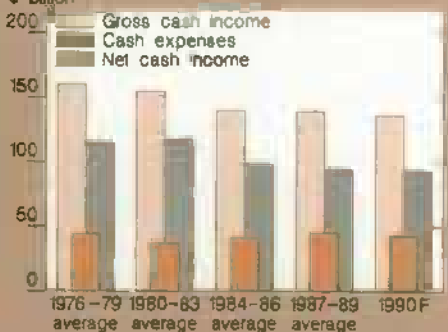
Billion bushels

Cash receipts from crops<sup>4</sup>

\$ billion

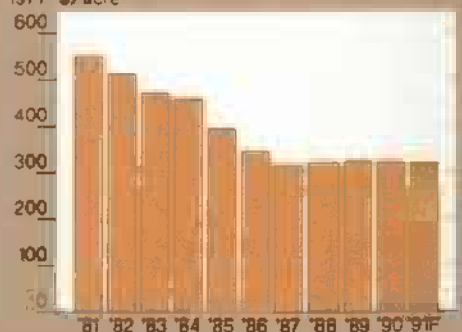
Real cash income<sup>6</sup>

\$ billion



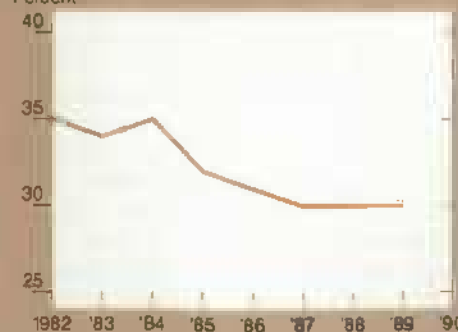
Average real value of farm real estate

1977 \$/acre



Farm value/retail food costs

Percent

<sup>1</sup>For all farm products. <sup>2</sup>Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts. <sup>3</sup>Retail weight. <sup>4</sup>Seasonally adjusted annual rate.<sup>5</sup>I=Dec.-Feb.; II=Mar.-May; III=June-Aug; IV=Sept.-Nov. <sup>6</sup>Cash expenses plus net cash income equals gross cash income. F=forecast

committees also prepare the early-season U.S. output estimates.

Analysts from the World Board, Economic Research Service, Agricultural Stabilization and Conservation Service, Agricultural Marketing Service, and the Foreign Agricultural Service serve on the committees, which are commodity-specific. Analysts go into the meetings with their own sets of estimates, and hash out their differences to arrive at the month's numbers.

## Exports, Stocks Most Tricky

Exports are difficult to estimate because they depend on the production and use forecasts for each country as well as on a wide range of other factors, including changes in trade policies, and expected price and exchange rate movements. Ending stocks, however, are the most troublesome to pin down. For the most part, they are residuals that fall out of the estimates of production and use.

Fluctuations in Soviet grain imports account for much of the uncertainty in world trade and U.S. exports. Unexpected changes in Soviet grain import needs are often the single most important component of the difference between the initial and final trade estimates of wheat and coarse grains.

The average deviation for U.S. exports of wheat, for example, stays near 12 percent until the October forecast, 5 months into the U.S. marketing year. Differences from the final number for U.S. coarse grain exports start at 16 percent in May, and do not drop below 10 percent until February, 6 months into the corn and sorghum marketing years.

However, the forecast of U.S. soybean exports steadily improves, although the error in the foreign export forecast remains large. The average deviation of the U.S. export forecast falls below 10 percent by November, the third month of the marketing year.

A large share of U.S. sales is usually made by this time. But Southern Hemisphere crops are just being planted, and harvesting there does not begin until March.

For U.S. ending stocks, the average difference between the May forecast and the final estimate is 14 percent for wheat and 45 percent for coarse grains. The average errors in foreign stock estimates are lower: 12 percent for wheat and 18 percent for coarse grains. These estimates improve, although somewhat gradually, as the months pass.

While there appears to be little or no overall bias in the estimate of U.S. exports, the May forecasts have overstated U.S. coarse grain exports in 6 of the past 9 years. For much of the 1980's, world coarse grain trade was flat or declining, yet most analysts continued to expect a turnaround.

When the turnaround finally came in 1988/89 and 1989/90, USDA underestimated the extent of the recovery. Again, variability in Soviet purchases explains much of this track record.

## Why Does USDA Forecast?

Information is the lubricant that keeps markets working efficiently. USDA is uniquely situated to gather the information needed on domestic and international commodity markets. The department has the largest network of agricultural experts scattered across the nation and, perhaps, the world.

But, USDA could simply publish the raw survey and research results. Aside from the department's expertise, why forecast?

If all forecasting were left to private firms, small players in the market could be left in the cold. USDA's forecasts make objective information available to all market participants at the same time. Moreover, the department's forecasts are used as the point of departure by most private forecasters.

In addition, USDA estimates are used for planning by government and private decisionmakers. For example, the 1985 Food Security Act requires the Secretary to make program decisions such as the appropriate percentage of base acres to be held out of production the following year through the Acreage Reduction Program requirements. And the forecasts are used to estimate the costs of the farm programs for the federal budget.

Academic research has shown that USDA estimates move markets, especially during critical growing months. This is not the intent of the forecasting work, but it is evidence that the forecasts contain new information valued by market participants. [Frederic Surls (202) 786-1824 and Gregory Gajewski (202) 786-3313] **AO**

## Livestock, Dairy, and Poultry Overview

*Fed cattle marketings are expected to increase during the spring and early summer. Live cattle and retail beef prices likely will fall as a result. But, hog and pork prices may continue to be high through the summer, as production remains below a year earlier.*

*Wholesale broiler prices are expected to recoup some of the ground lost in April, as summer vacations and barbecuing increase demand seasonally. Wholesale turkey prices probably will increase through the end of the year as producers slow output growth.*

*Egg prices are expected to decline as production increases, following a period of positive net returns. Dairy output*

## Agricultural Economy

*likely will rise in 1990. Cheese use will have to grow unusually fast to maintain recent farm and wholesale prices.*

### More Cattle on Feed

Reduced fed cattle marketings during the winter quarter and early spring, and rising numbers of heavy weight cattle on feed, indicate larger fed cattle marketings in coming months. Fed cattle prices likely will decline from early-May levels.

On April 1, the quarterly 13-state *Cattle on Feed* report showed a 10.1-million-head inventory, 1 percent above a year earlier and the highest since 1978.

Although placements on feed during the first quarter were 2 percent below last year's record, they were 13 percent greater than the 1980s' 10-year average.

First quarter fed cattle marketings declined 1 percent from a year earlier, even though the early January cattle-on-feed inventory rose 3 percent. Last fall, many light weight stocker cattle were forced into feedlots because of poor wheat pasture conditions on the Great Plains. These cattle require more days on feed to reach market weight and grade.

Fed cattle marketings during the spring and summer quarters are expected to exceed last year and could set a record. Large numbers of heavy steers (900 pounds and over) and heifers (700 pounds and over) support spring-quarter marketing intentions of 6.1 million head, up 1 percent from last year. However, declining steer and heifer slaughter weights suggest that feedlots are current in their marketings.

Winter-quarter commercial beef production was slightly lower than a year earlier as reduced cattle slaughter more than offset a 2-pound gain in dressed weights. Steer slaughter was unchanged, but heifer kill was 3 percent smaller than last year. Total cow slaughter was about 1 percent below last year, with dairy cow kill off 5 percent and beef cow kill up 4 percent.

Beef production during the second quarter is expected to increase to 5.850 million pounds, 1 percent above a year

earlier. Increases in fed steer and heifer slaughter probably will more than offset a seasonal decline in cow slaughter.

Wholesale boxed beef and Choice live steer prices hit record highs in the first quarter. Yet slaughter cattle prices have begun to decline seasonally, and they are expected to continue easing lower during the second quarter and possibly into the third.

Retail Choice beef prices set a record in April at \$2.85 per pound, 6 percent above a year earlier. Live and wholesale prices are expected to decline faster than retail beef prices.

### Hog Prices Climb

Hog price rises continued counterseasonally in April, even though the typical pattern is for April to see the lowest prices of the first half of the marketing year. The slaughter rate was about 8 percent below a year ago this April and may continue below a year earlier through summer.

Higher hog prices in recent months have boosted cash receipts above total costs, providing an incentive for producers to expand breeding herds and increase farrowing intentions. Year-over-year gains in pork production are expected by fourth-quarter 1990—output may continue to increase into 1991.

U.S. pork imports fell about 15 percent in the first quarter, mostly because of reduced imports from Canada, Denmark, and Poland. But, higher U.S. prices and larger Danish production could increase U.S. imports over last year in the second half of 1990.

Pork stocks in cold storage were down more than a fourth at the end of the first quarter compared with a year earlier. Low stocks are expected to help support higher prices through summer. However, lower prices in the fourth quarter may encourage stockpiling, which could boost ending stocks over last year's 285 million pounds.

Higher wholesale prices pushed retail pork prices to a record \$2.01 per pound in April. Monthly retail pork prices may go higher in coming months, reflecting strong wholesale prices.

### Broiler Expansion Continues

Broiler production continues to expand at a 7-percent annual rate in the second quarter. Producers' net returns have remained positive despite falling wholesale prices in April. Retail prices may not follow the decline in wholesale prices, though: seasonal demand is expected to be strong and competing meat prices are likely to remain high.

Wholesale broiler prices have been below a year earlier since the end of March. The 12-city wholesale price in May likely averaged 58 cents per pound, around 12 cents below May 1989. Second-quarter prices are forecast to be in the middle to upper 50's, compared with 67 cents a year ago.

Prices are expected to remain strong in the third quarter, averaging 55-61 cents per pound. Supporting factors include summer barbecuing, reduced pork supplies, continued high retail beef prices, and large poultry exports. Prices likely will average in the mid-50's for the year, compared with 59 cents a year ago.

Retail prices in the first quarter were roughly the same as a year earlier, averaging 90 cents per pound. But, in the second quarter they are expected to be about 5 percent below last year, averaging in the low 90's.

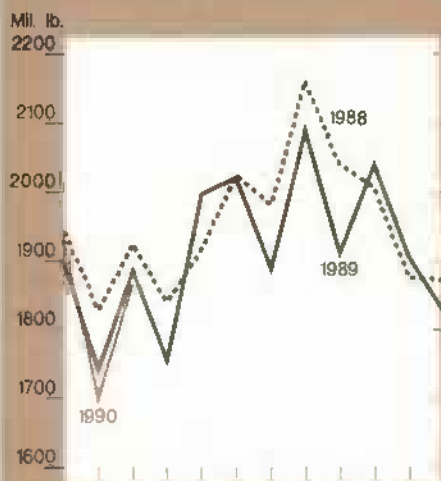
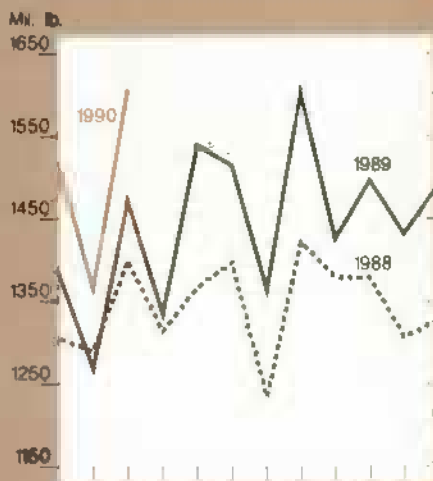
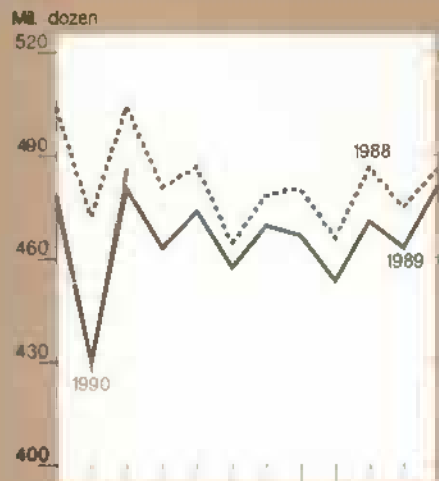
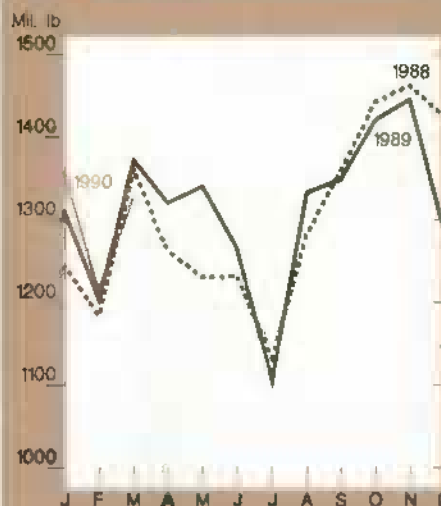
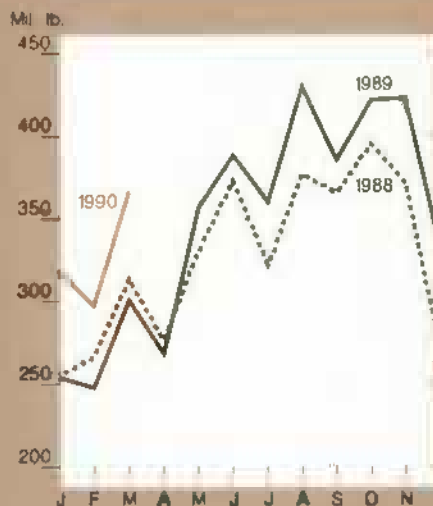
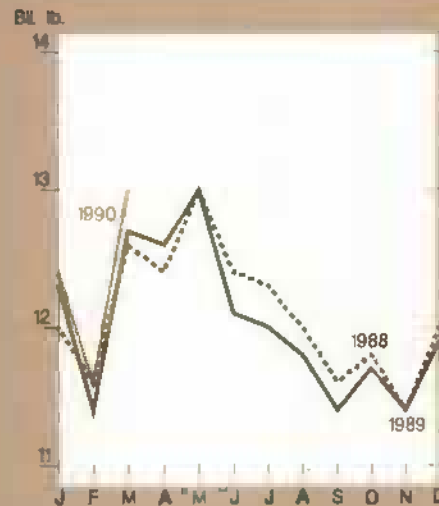
### Turkey Output May Slow

Turkey production is forecast to grow more slowly as 1990 progresses. While first-quarter annualized growth was 22 percent, second-quarter production is forecast to be only 8-9 percent above a year earlier. And third-quarter expansion is expected to be 2 to 3 percent. Annual production probably will be about 7 percent above 1989.



## Livestock and Product Output

## Agricultural Economy

**Commercial beef****Broilers<sup>1</sup>****Eggs****Commercial pork****Turkeys<sup>1</sup>****Milk**

<sup>1</sup>Federally inspected production, ready-to-cook.

Estimated net returns to producers have remained negative or near break-even since August 1989, and placements slowed through March from the 27-percent jump seen last September. However, April placements were 11 percent above a year earlier. Returns may come close to break-even in the second quarter, and are expected to be stronger during the second half.

Turkey stocks at the end of March were 18 percent above a year earlier, and wholesale Eastern-region hen prices were flat in April, at 60 cents per pound. With slower output growth in May and June, second-quarter hen prices are expected to maintain their strength, averaging 58-62 cents.

Hen turkey prices may rise to 62-68 cents during the third quarter, compared to last year's 62 cents. Retail whole turkey prices are expected to increase during the second half, reaching about the same as a year earlier.

### Egg Prices Dropping

Total egg production is forecast to rise 1 percent in 1990. Second-quarter production likely will be about 1 percent higher than a year ago, around 1.4 billion dozen. Production is expected to increase 1 percent and 2 percent in the third and fourth quarters, compared with a year earlier.

Egg producers have begun to increase flock size in response to past strength in prices and net returns. The table egg-type flock on April 1, numbering almost 231 million hens, was about 1 percent above last year; it was the first time in several months that flock size ran above a year earlier. The hatch for the first quarter also was up, by 16 percent.

Production increases had pushed prices below a year earlier by the end of April. Second-quarter prices are likely to average 71-75 cents per dozen, compared with 75 cents in 1989. Annual New

## Agricultural Economy

York wholesale egg prices are expected to average 70-76 cents, below last year's 82 cents.

Retail prices are expected to average 92 cents per dozen in the second quarter, slightly lower than last year, and then drop to 85 cents in the third quarter. Annual retail prices are projected to average about 94 cents per dozen, down 6 percent from last year.

### Cheese Use To Remain Strong?

Commercial use of milk and dairy products probably will grow substantially in 1990. Sales of cheese will be boosted by favorable economic growth. Fluid milk sales are expected to grow modestly, and commercial use of butter likely will be at least stable. Despite large year-to-year increases in retail prices during early 1990, commercial use of all dairy products may grow as much as 3 percent from 1989's 137.2 billion pounds, milk equivalent.

January-March commercial use rose more than 2 percent from a year earlier. Cheese sales climbed sharply, fluid milk use was slightly larger, and butter disappearance was near the weak levels of a year earlier. Meanwhile, commercial disappearance of nonfat dry milk trailed the export-swollen levels of a year earlier by almost a fifth.

Commercial use of cheese will be the key to wholesale dairy prices and farm milk prices in coming months. Prices might be stable if increased cheese sales compensate for growing milk output and the large quantities of skim milk released by the loss of export markets for nonfat dry milk.

Such a large surge in cheese sales would be quite unusual, although not unprecedented. In many ways, market developments in 1989 and thus far in 1990 resemble those of 1975-76, when cheese use was strong enough to keep all other dairy markets tight.

Recent jumps in commercial cheese use could be interpreted as a build-up of pipeline stocks. At the start of 1990, cheese supplies probably were very low. If traders have built big stocks, wholesale prices of cheese, nonfat dry milk, and farm milk may suddenly weaken.

For further information, contact: Mark Weimar and Ken Nelson, coordinators; Fred White, cattle; Leland Southard, hogs; Lee Christensen and Larry Witucki, broilers, turkeys, and eggs; Sara Short and Jim Miller, dairy. All are at (202) 786-1285. **AO**

## Field Crops Overview

*USDA's first projections for the 1990/91 season show that world wheat output could set a record. U.S. production could be the third highest ever. Production is forecast up in Argentina, Canada, the EC, and the U.S. As a result, the U.S. average farm price is expected to slide to \$2.90-\$3.30 a bushel from 1989/90's \$3.71, and stocks will go up.*

*But world trade in wheat should increase only slightly because of larger production in several large importing countries.*

*World coarse grain production also is forecast to rise, but trade may drop because of more feed use of wheat. U.S. corn production is projected to go up, but use will increase even more, so ending stocks may drift down. U.S. average farm prices for most coarse grains could remain firm.*

*Both foreign and U.S. cotton crops are projected to rise, although world supplies will remain tight and trade is likely to be relatively flat. While world oilseed output is forecast to set a record, U.S. soybean production is expected to be almost the same as a year earlier.*

### Area & Weather Boost Foreign Wheat

World wheat output in 1990/91 is forecast to reach a record 568 million tons, 6 percent over a year earlier. Foreign wheat production also will reach a new high, primarily because of output increases of a million tons or more each in the USSR, China, Canada, the EC, and Argentina.

Weather this winter was favorable through much of Northern Europe, China, and the USSR. Soviet wheat output is forecast to reach 95 million tons, up 5 percent from a year earlier.

In Canada, spring wheat area could be up 7 percent, according to *Statistics Canada*. This would more than offset area drops for durum and winter wheat.

In Argentina, area could jump from 4.5 million hectares in 1989/90 to 6 million. And even if wheat prices slip, which is likely, Argentine farmers will find wheat a profitable choice. Normally, wheat does not seriously compete with other crops for area in Argentina (it is often double-cropped with soybeans).

Among major exporters, only Australia is forecast to have lower yields which will more than offset the gain in planted area. For all major foreign exporters, output is expected to rise 3 percent.

Global wheat imports are forecast to increase only 3 percent because the largest importers—the USSR and China—are expected to harvest larger crops. Despite the higher production, Soviet wheat imports are likely to rise 1 million tons to 15 million. The Soviets are expected to substitute wheat for coarse grains in livestock rations.

Among foreign exporters, Canada may show the largest trade gain over a year earlier. But, U.S. wheat exports are projected to fall 1 million tons from 1989/90.

The improving wheat supply situation and weaker prices relative to corn suggest that more wheat will be fed to

## Agricultural Economy

## World, U.S. Wheat Output Projected To Rise

	1988/89	1989/90	1990/91
<i>Million metric tons</i>			
<b>WORLD</b>			
Wheat			
Production	501	535	568
Use	531	538	553
Exports	97	97	101
Ending stocks	117	114	129
Corn			
Production	399	460	480
Use	459	478	484
Exports	64	72	68
Ending stocks	86	68	64
Soybeans			
Production	95	107	—
Use	98	104	—
Exports	24	27	—
Ending stocks	18	20	—
<b>UNITED STATES</b>			
Wheat			
Production	49	55	73
Use	27	28	31
Exports	38	35	34
Ending stocks	19	12	21
Corn			
Production	125	191	206
Use	133	148	152
Exports	52	59	56
Ending stocks	49	34	32
Soybeans			
Production	42	52	52
Use	31	32	34
Exports	14	17	17
Ending stocks	5	8	10

Notes: Exports of wheat and corn do not include intra-EC trade shipments.  
Data are for marketing years.

problem in portions of the Texas Blacklands and Georgia. And, in parts of western Nebraska, the Russian wheat aphid is dining on the new crop.

Spring wheat plantings are already underway. The pace of sowing appears normal in most states, although in both Idaho and South Dakota the pace is well above normal. North Dakota subsoils have been rated dry for 3 consecutive years, and have been rated mostly severely to extremely dry through the middle of May.

### Foreign Coarse Grains Up Slightly

World coarse grain output in 1990/91 is forecast to rise 3 percent to 819.9 million tons. But, foreign production will rise only about 1 percent, with no large changes anticipated for any major exporter. Output among major importers also is projected to change little from 1989/90.

World trade in coarse grains is expected to decline slightly in 1990/91, to 95.1 million tons. This reversal from growth over the previous 2 years is primarily due to the recovery of feed wheat trade. U.S. coarse grain exports are forecast at 64.5 million tons, down 2.7 million, but the U.S. will have the same market share. The Soviet Union, last year's largest global importer of coarse grains, is expected to cut purchases by 2.6 million tons.

U.S. corn production for 1990/91 is projected at 8.1 billion bushels, up 8 percent from a year earlier. As of mid-May, the planting pace was slightly behind normal for both corn and sorghum.

Many areas across the Corn Belt are anticipating record or near-record output per acre. However, some portions of the country remain quite dry, including parts of Nebraska and Iowa. In addition, recent cool, wet weather has slowed crop emergence in parts of Texas.

Even modest rebuilding of corn stocks is unlikely in 1990/91. Exports are expected to remain high, while feed and

livestock in 1990/91. Global wheat stocks should rise to 129 million tons, reversing 3 years of decline.

### U.S. Wheat Output Near 1981 Record

The U.S. wheat crop for 1990/91 is estimated to be 2.69 billion bushels, up 32 percent from a year earlier. The crop would approach the production record set in 1981, 2.8 billion. Prospects for the winter wheat crop are bright. At 2.1 billion bushels, it will be larger than the total U.S. wheat output last year, and 44 percent above 1989/90 winter wheat production.

A year ago, the domestic winter wheat crop was already seriously damaged by poor weather. As of mid-May this year, 74 percent of winter wheat was rated good to excellent, compared with only 25 percent last year. Even more striking, the 1989/90 crop was rated 36 percent poor to very poor, compared with only 4 percent this year.

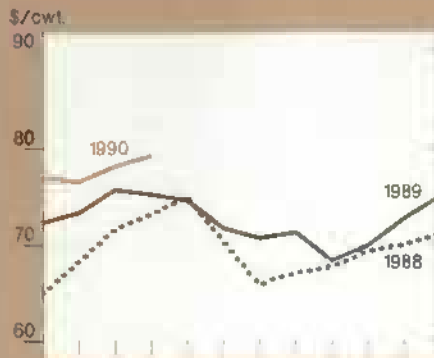
USDA extension agents in the Midwest have rated the crop in Kansas, the largest winter wheat producer, at about 80 percent good to excellent. And the Oklahoma crop is even better at 93 percent.

However, some limited disease and pest problems have been noted. Rust is a

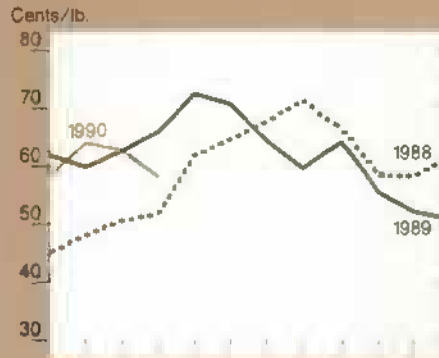
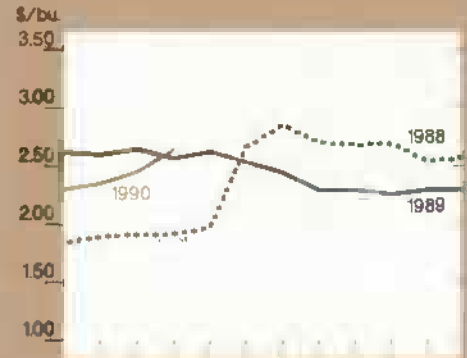
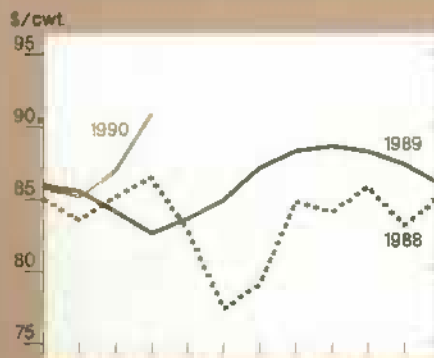
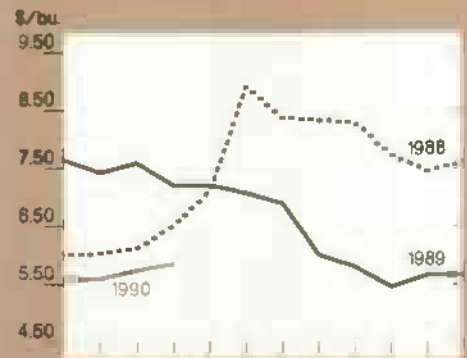
## Agricultural Economy

## Commodity Market Prices

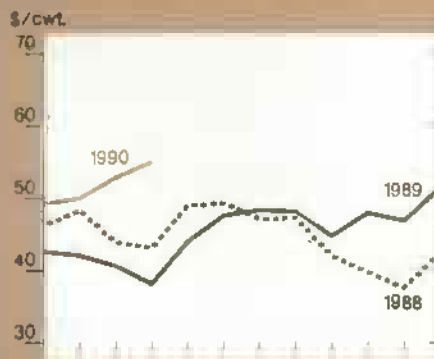
Choice steers, Omaha



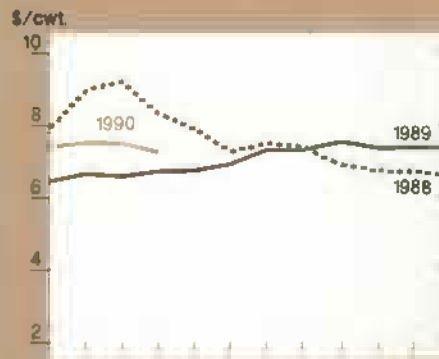
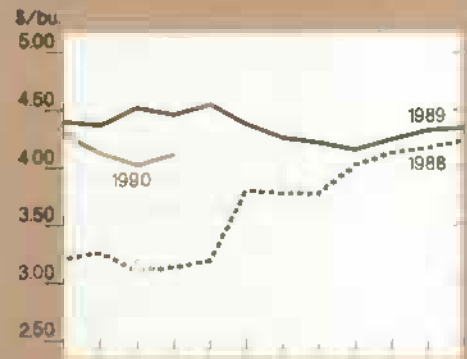
Broilers, 12-city average

Corn, Chicago<sup>3</sup>Feeder cattle, Kansas City<sup>1</sup>Eggs, New York<sup>2</sup>Soybeans, Chicago<sup>4</sup>

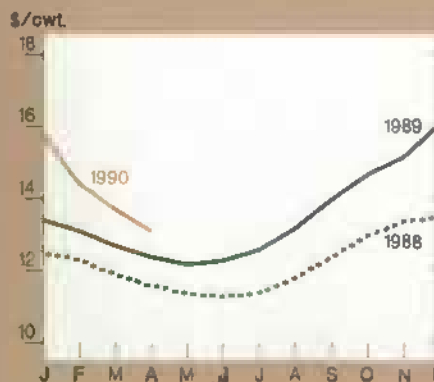
Barrows and gilts, 7 markets



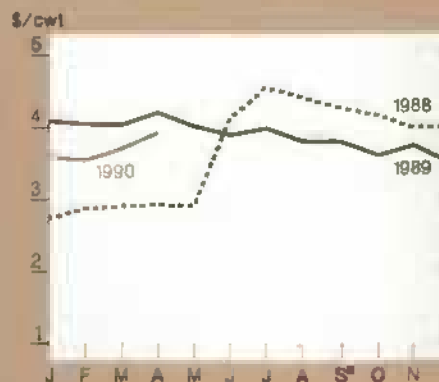
Rice (rough), SW Louisiana

Wheat, Kansas City<sup>5</sup>

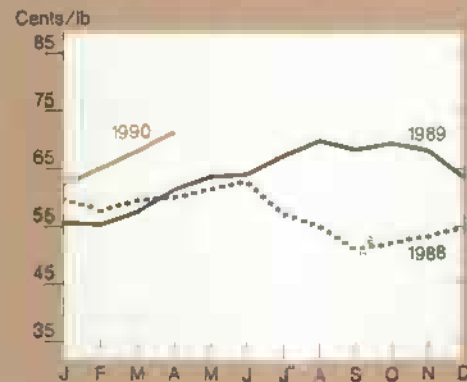
All milk



Sorghum, Kansas City



Cotton, average spot market

<sup>1</sup>500-700 lbs., medium no. 2. <sup>2</sup>Grade A large. <sup>3</sup>No. 2 yellow. <sup>4</sup>No. 1 yellow. <sup>5</sup>No. 1 HRW.



residual use may exceed 4.6 billion bushels. Stocks by the end of the year are anticipated to be far below recent years, and perhaps only about one-fourth of the 4.9 billion bushels in 1986/87.

## More U.S. Rice Expected

World rice output and trade are expected to be essentially unchanged in 1990/91. Additional details on individual country production, trade, and utilization for 1990/91 will be available in July, when USDA publishes full foreign supply and utilization estimates for rice as well as cotton and oilseeds.

U.S. rice production is expected to increase to 160 million cwt; growers say they intend bigger plantings in all producing states except California. Special attention is being given to the rice areas of Arkansas and Mississippi, where wet weather and flooding hampered plantings in April and May.

Although plantings may be up this year, the survey indicated that less rice would be planted than 2 years earlier. This held even though a 25-percent Acreage Reduction Program (ARP) requirement was in effect for 1988, whereas the 1990 reduction is only 20 percent. Rice yields have exceeded the 1970-85 trend for each of the last 5 years, largely because of higher yielding varieties and high ARP's that removed less productive land.

## U.S. Cotton Stocks To Remain Tight

World cotton production in 1990/91 is forecast to be up 10 percent to 88 million bales, but supplies will remain tight. Foreign production likely will rise 6 percent to 72 million bales. Global output will be heavily dependent on the size of the crops in the U.S., China, the USSR, India, and Pakistan—the major producers.

China's cotton production is likely to benefit from an increase in the cotton procurement price and a planned 4-percent increase in acreage. But, in the USSR, the government indicates that area will decline about 200,000 hectares. This

could cut output but raise average yields, since marginal land is usually the first to go.

World cotton trade is projected to remain stable at about 25 million bales, with the U.S. accounting for about 30 percent.

Domestic cotton production in 1989/90 was down 21 percent from a year earlier, to 12.2 million bales. However, 1990/91 production is forecast to increase to 16 million bales, based on trend yields, relatively low abandonment, and planting intentions of 12.4 million acres.

Cotton planting is already well underway and generally on schedule. California's plantings are already about three-quarters complete and Arizona's are almost finished. Farmers in Texas and Mississippi are beginning plantings now. However, plantings across the Delta continue to be slow.

Beginning U.S. stocks for 1990/91 are less than half the level of a year earlier because of two factors. First, exports in 1989/90 are estimated to be high, at 7.8 million bales, due to strong global import demand. And second, the smaller planted area last season shaved production.

## Less Oilseed Area in Canada, More in China

World oilseed output is forecast to rise 4 percent, reaching 222 million tons. Foreign production will increase to 161 million tons, up 5 percent. Although USDA has not yet prepared country-level foreign production forecasts for 1990/91, some foreign producers have indicated the direction of change for their crops in 1990/91.

According to *Statistics Canada*, rapeseed plantings there may decline 18 percent and soybean plantings 7 percent. Developments in China, on the other hand, may lead to larger oilseed area.

China's government has raised prices for edible oils (rape, sesame, peanut, soybean, and cotton) by an average of 27 percent. These increases came too late to affect winter rape planting. The soybean

oil price increase, the first since 1986, is expected to boost soybean production in the northeast. But, it is unlikely to affect plantings in other parts of China, where farmers can earn more money growing corn.

U.S. soybean complex exports are expected to shift slightly more in favor of soybean meal. U.S. soybean exports are forecast at 17 million tons, soybean meal at 4.7 million, and soybean oil at 0.6 million.

All indications point to a normal domestic soybean crop of 1.9 billion bushels in 1990/91. This is about equal to 1989/90 and 1987/88, and well above the drought-reduced outturn of 1988/89.

With projected U.S. supplies marginally larger than use for 1990/91, some stock rebuilding is likely, perhaps by 50 million bushels. If the output and use forecasts are realized, the stocks-to-use ratio will rise from 1989/90's 17 percent to 19.

Soybean prices jumped in April from \$5.65 at the beginning of the month to over \$6.00 a bushel by the end. Oil and meal prices have risen as well. Delays in marketing the South American crop, particularly disruptions associated with changing government policies in Brazil, are the most likely cause.

But, in the coming months, prices will be strongly influenced by the record soybean output expected from Argentina and Brazil combined and by the good growing conditions in the U.S. [Tom Bickerton (202) 786-1826 and Jim Cole (202) 786-1840]

For further information, contact: Sara Schwartz, world food grains; Edward Allen, domestic wheat; Janet Livezey, domestic rice; Pete Riley, world feed grains; Larry Van Meir and Jim Cole, domestic feed grains; Robert Cummings, world oilseeds; Roger Hoskin, domestic oilseeds; Carolyn Whitton, world cotton; Scott Sanford, domestic cotton; Jim Schaub, domestic peanuts. World information (202) 786-1824; domestic (202) 786-1840. **AO**

## Agricultural Economy

# Specialty Crops Overview

*Wholesale values for floriculture crops rose 6 percent in 1989, in contrast to near-stagnant sales in 1988. Values increased for all major groups except foliage plants.*

*Tobacco growers said they plan to plant 6 percent more acreage this season. The gain likely reflects higher effective marketing quotas. U.S. cigarette output fell last year; the drop in domestic consumption more than offset the rise in exports.*

*Effective April 27, the U.S. sugar import quota was raised to 3.1 million short tons, up 9.5 percent. U.S. prices are currently above the market stabilization price, but likely will drop as imports pick up.*

## Growth Returns to Floriculture Sales

For USDA's 28-state survey of 28 floriculture crops, the wholesale value equivalent of all sales in 1989 rose to \$2.43 billion. Growth in producers' receipts averaged 10 percent annually between 1982 and 1987, but 1988 sales were essentially unchanged from 1987.

The 1988 departure from trend may have been a sign that the floriculture market is approaching maturity, and that further expansion in demand will come only from population gains, higher incomes, and more advertising.

While sales of bedding/garden plants increased 15 percent from the drought-affected 1988 level, partly reflecting greater interest in home gardening, grower receipts from cut flowers went up only 2 percent.

Smaller receipts for standard carnations and pompon chrysanthemums offset gains in roses and other cut flowers. Consumers who buy cut flowers may be switching from the lower valued standard carnations and pompon chrysanthemums to higher valued items such as roses.

The value of leatherleaf fern production declined, while receipts from other cut cultivated greens jumped 41 percent. Florists may be switching from leatherleaf to other greens for flower arrangements. Although both domestic production and imports were down in 1989, the leatherleaf remains the biggest value item among the cut cultivated greens.

Growers indicate they plan to scale back further the production area for most cut flowers in 1990. The exception is a 2-percent increase for hybrid tea roses. The value of sales for hybrid tea roses increased 8 percent in 1989. Area intentions are all up for potted flowering plants, potted foliage, bedding and garden plants, and cut cultivated greens.

Although the import value of cut flowers jumped 11 percent in 1989, the quantity imported fell 2 percent. Again, the largest declines occurred among standard carnations and pompon chrysanthemums.

Colombia, the biggest exporter to the U.S., shipped 14 percent fewer standard carnations and 18 percent fewer pompon chrysanthemums. Import value was up because of a 9-percent increase in rose shipments.

## Tobacco Quotas, Acreage Higher in 1990

U.S. tobacco growers' intentions to increase acreage this year by 6 percent coincided with higher effective marketing quotas for flue-cured and burley tobacco. The effective 1990 marketing quota for flue-cured is 4 percent higher, while the burley quota is up 13 percent.

Despite the expansion, total domestic tobacco supply for 1990/91 likely will be lower than a year earlier. Assuming average yields, this year's crop would exceed

1989's output by about 8 percent. However, smaller beginning stocks will more than offset the production gain.

The continuing decline in domestic cigarette use has more than equaled the growth in exports, resulting in about a 2.5-percent drop in output during 1989. U.S. smokers consumed 5 percent less cigarettes in 1989 than a year earlier, the biggest drop in 6 years.

And, domestic consumption probably will continue to fall this year because of consumers' health concerns, higher prices, increased restrictions on where people can smoke, antismoking activity, and declining social acceptance.

U.S. exports of both unmanufactured and manufactured (chiefly cigarettes) tobacco rose 20 percent in calendar 1989, to \$5 billion, and are expected to continue growing in 1990. Although U.S. tobacco prices are higher than those of most countries in world markets, U.S. tobacco generally carries a reputation for high quality.

Because much of the growth in world demand has been for higher quality cigarettes, the size and quality of the 1990 flue-cured and burley crops will be an important factor in determining how much U.S. tobacco exports rise.

## Fourth Rise in Sugar Import Quota

In April, USDA raised the U.S. sugar import quota for the fourth time during the current 21-month quota period (January 1, 1989-September 30, 1990), by 250,000 metric tons (about 275,580 short tons). The quota was previously raised in September and November 1989 and January 1990.

The sugar quota is used to achieve a balance between supply and demand in the domestic market at the market stabilization price (MSP). The MSP is a reference price that, if attained, should avert forfeiture of sugar used by processors as collateral for Commodity Credit Corporation loans.

U.S. raw sugar prices (nearby futures, c.i.f./duty-paid, New York, contract no. 14) averaged 23.14 cents a pound for the first 6 months of the fiscal year, compared with 21.92 cents for October-March 1988/89. Prices averaged 23.81 cents during April, substantially above the 21.95-cent MSP for 1989/90. The world raw sugar price for April 1990 averaged 15.24.

Domestic prices are expected to move closer to the MSP as heightened quota imports aid in correcting U.S. sugar supply-demand imbalances. The quota for fiscal 1990/91 is to be announced by September 15. [Glenn Zepp (202) 786-1883]

For further information, contact: Kate Buckley, fruit; Shannon Hamm, vegetables; Peter Buzzanell, sweeteners; Verner Grise, tobacco; Doyle Johnson, tree nuts and greenhouse/nursery; David Harvey, aquaculture. All are at (202) 786-1883 **AO**

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## Sugarbeets: East Lags West

USDA estimates that, during the last five seasons of the 1980's, global beet sugar production averaged 37.6 million metric tons, accounting for 36 percent of the world's sugar crop. And beet sugar output is up 11 percent from the second half of the 1970's.

Globally, growth in beet sugar production is almost entirely attributable to improved yields. But, a review of trends since the late 1940's shows that while yields in Eastern Europe and the Soviet Union have been largely static, yields in Western Europe and the U.S. have trended up sharply.

The prospects are now bright for a faster flow of yield-improving technology to Eastern Europe, given the region's recent market-oriented reforms. Coupled with likely continued advances in productivity among Western producers, beets could capture a bigger share of the world sugar market in the 1990's.

If Eastern European beet producers could close half the gap between their yields and the EC's over the next decade, Eastern European output would rise by about one-half. This would enable the region to shift land to other crops and eliminate the need for sugar imports that now come mainly from Cuba.

Prospects are more clouded in the Soviet Union, given the slower pace of reforms there. If the Soviets doubled their yields, they could sharply reduce imports of Cuban sugar. However, yields still would be one-third below those of the EC.

### Romania, USSR Have Lowest Yields

USDA estimates that Eastern Europe (Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania, and Yugoslavia) annually produced 5.4 million metric tons of beet sugar, raw value,



over the last five seasons (1985/86-89/90). The production was from an average of 1.4 million hectares (1 hectare equals 2.47 acres).

As a group, Eastern European yields averaged 32.9 tons of beets and 3.8 tons of sugar per hectare. Romania's yields were lowest in Europe at 2 tons of sugar per hectare. Poland, the region's largest producer, had yields of 4.4 tons, compared with 8.2 tons in West Germany.

But, Western seed technology and know-how are being brought in via joint ventures. Much needs to be done to improve the availability of monogerm seed varieties, changing traditional cultural practices, and improving the timing of nitrogen application.

For the same period, the Soviet Union—the world's largest beet sugar producer as well as the largest sugar importer—averaged 9 million tons of sugar, raw value, from 3.4 million hectares, according to USDA estimates. Soviet yields averaged 25.6 tons of beets and 2.6 tons of sugar per hectare.

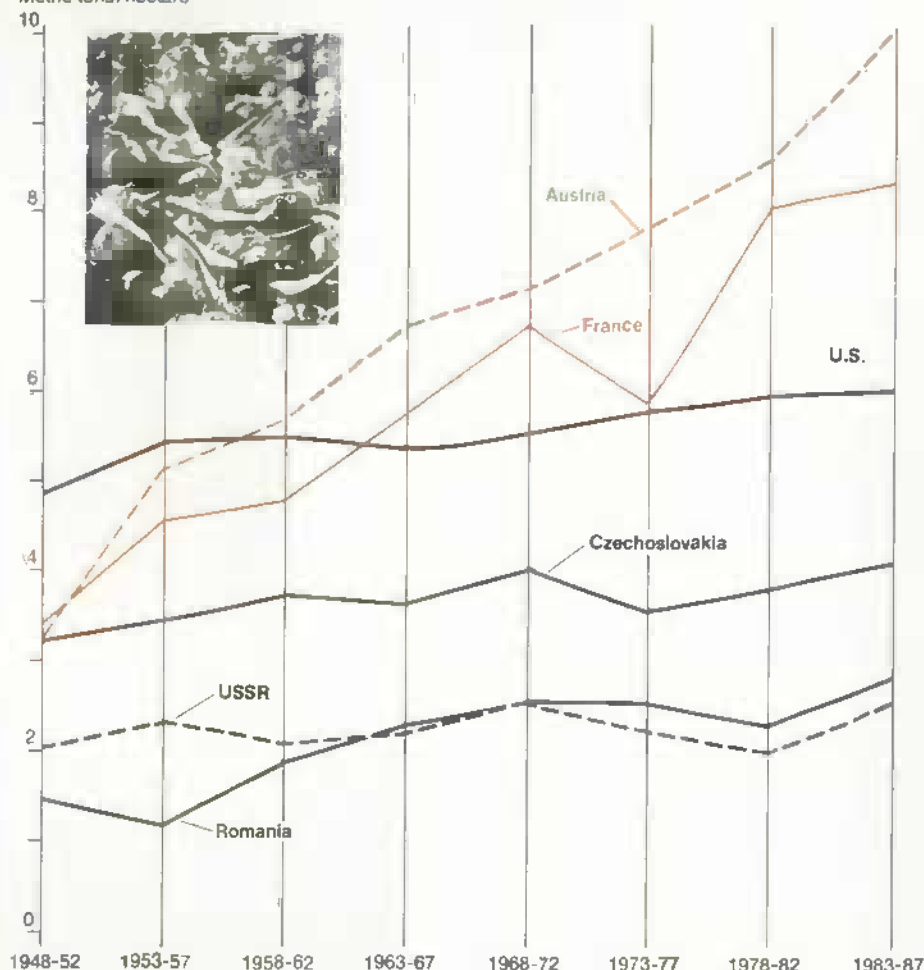
Sugarbeet yields in the field in Eastern Europe and the Soviet Union are about half those of the EC. Sugar yields per hectare, providing an indicator of processing efficiency, are about two-thirds lower.



## Commodity Spotlight

### Sugarbeet Yields In Austria & France More Than Double Those In E. Europe.

Metric tons/hectare



The astounding thing about the discrepancy between sugar yields in the east and west is its historic longevity. For the Soviet Union, domestic sugar production has expanded from under 3 million tons in the 1940's to an annual average of 9 million during the last 5 years. But the gain has been almost entirely due to nearly tripling sugarbeet area harvested, up from 1.3 million hectares.

Over the past several years, however, the Soviets have boosted their productivity through the Intensive Technology (IT) program. IT is basically the intensive use of inputs requiring a high level of management.

According to official Soviet statistics, the USSR now uses 420 kilograms of mineral fertilizer (mineral-weight basis) and 22.2 kilograms of organic fertilizer for

every hectare of land sown to sugarbeets. That's compared with about 280 kilos of mineral fertilizer in the Red River Valley of Minnesota and North Dakota.

Some reports say that sugarbeet production now uses more mineral fertilizer per hectare than any other crop in the USSR; IT is employed on close to 90 percent of all the land sown to sugarbeets. Using IT, the USSR has been able to increase sugarbeet yields from 21.8 tons per hectare in 1981/82-1985/86 to over 25 tons during the last four seasons.

However, there are reports that the Soviets are overfertilizing with nitrogen. While it fosters higher beet tonnages, nitrogen lowers sucrose content at harvest and makes extraction of the sugar more difficult.

### Transport, Processing Are Weakest Links

Last fall, rail car and fuel shortages again caused delays moving Soviet beets from field to factory. Typically, in Stavropol in the northern Caucasus, an area that grows about 1 million tons of beets a year, the two local plants were able to process only about half the beets delivered. Much had to be shipped to processing plants outside the region, resulting in spoilage and sucrose losses.

While the Soviet Union's processing sector has over 300 sugar refining factories, the Soviet press reports that many use machinery from the last century. Lack of spare parts also hampers refining. Some processors report needing compressors, bearings, and steel fittings.

The poor facilities are reflected in extraction rates of about 60 percent, compared with 82 percent in the U.S. and 92 percent in France. Moreover, despite recent gains in beet yields, sugar per hectare was unchanged throughout the 1980's, at 2.5-2.9 tons.

In Eastern Europe, the transportation and processing problems are much the same as in the Soviet Union. In Romania, for example, the sugarbeet sector continues to suffer from poor seed quality, lack of inputs, inefficient transportation, and antiquated processing, according to recent reports.

In East Germany, yields for the last five seasons averaged 3.4 tons of sugar per hectare, nearly 5 tons less than in West Germany. In the late 1940's, the yield gap between the two countries was just over 1 ton per hectare.

But the beet processing industry is undergoing dramatic changes in East Germany. The government-owned Kombinal processor is reforming as a stock company, and extensive modernization is being planned. German reunification clearly will upgrade the sugar sector in the east.

A reported joint venture between Austria and Czechoslovakia would upgrade Czech mills with Austrian equipment.



## Beets Need Babying

Overall yields of beet sugar per hectare are a function of both field and factory performance. Advances in field yields and sucrose content reflect improved seed varieties, changes in cultural practices, and mechanization.

R&D by seed companies in Western Europe and the U.S. has produced new varieties with both higher genetic yield potential and greater resistance to diseases and pests.

Development and use of monogerm seeds have enabled growers to reduce the costly practice of overseeding followed by thinning. And, the new seeds have allowed growers to improve the efficiency of fertilizer and pesticide applications and to more easily mechanize cultivation and harvesting.

U.S. producers have greater expertise than their Eastern European and Soviet counterparts about the timing of fertilizer applications, particularly nitrogen. Nitrogen should not be applied late in the season because excess amounts at harvest make it more difficult for processors to extract the sucrose.

While factories in Western Europe and the U.S. pay more for beets that are cheaper to process, such price incentives have been missing in Eastern Europe and the Soviet Union.

Beets deteriorate rapidly once harvested, so good transportation systems and ready processing plant capacity are critical in limiting post-harvest losses.

A major innovation in beet processing is just beginning to affect the U.S. market: a "chromatographic separator" that extracts sucrose ordinarily lost to molasses.


Molasses is essentially a byproduct of the refining process, and worth much less than sugar. Industry reports suggest that the new equipment recovers 75 to 85 percent of the sugar currently lost to molasses, raising the typical factory extraction rate from 82 to 92 percent.

Also, Poland is said to be looking for cooperative arrangements with the West to improve the efficiency of its processing sector.

## Western Europe Sets the Standard

In France, Western Europe's largest beet sugar producer and exporter, sugarbeet yields in the field averaged 54.4 tons during the last five seasons and 9.4 tons of sugar per hectare—higher than in the U.S. Field yields in the U.S. averaged 46 tons of beets and 6.4 tons of sugar. EC farms are managed intensively with a high level of quality inputs, including seeds developed for local conditions and careful management of nitrogen.

Western Europe also has an ideal climate with a longer growing season. This facilitates sucrose accumulation in the beet root. Moreover, the EC processes its sugarbeets faster. The EC harvest averages 75 to 90 days, compared with 145-150 in the USSR and 120-125 in the U.S. As a result, EC beets are fresher when sliced, and sugar loss is minimized.

Moreover, EC sugar policies, introduced in 1968, have induced output growth while the guaranteed price scheme has encouraged producers to invest heavily in new technologies for both the farm and the factory. [Peter Buzzanell and William Moore (202) 786-1888] 

## Demand for Beef: Has It Changed?

Concern about shifts in consumers' demand for beef first surfaced in the late 1970's, when U.S. per capita beef consumption stopped trending upward. Consumption grew steadily through the 1960's and mid-1970's, but peaked in 1976. In the late 1970's per capita consumption dropped, and in the 1980's it failed to rebound.

Throughout the 1980's, both beef consumption and prices were lower than industry analysts expected. So, many analysts postulated that the demand for beef had declined permanently. While people buy what is produced in the short run, consumer demand drives output decisions in the long run.

Many economists have examined this issue, but they have not reached a consensus. Much of the controversy is due to the fact that "demand" is used three ways. Sometimes it means the amount of the product people actually buy. But the amount of a product purchased depends on (1) its price, (2) the price of related goods, (3) incomes, and (4) consumer tastes. Changes in any of these four factors can cause changes in consumption.

The second use of the term is the relationship between the price of an item and the amount of it people would buy, assuming that other prices, incomes, and tastes do not change. Here, demand changes when other prices, incomes, or tastes change.

Finally, demand is used to describe the relationship among purchases, prices, and incomes assuming fixed tastes. Thus, using the third definition, a change

## Commodity Spotlight

in demand is equivalent to a change in consumer tastes.

### **Beef Consumption Is Down**

Based on either of the first two definitions, the demand for beef has changed since the mid-1970's. Consumption of beef has declined and people are willing to purchase less beef at a given constant-dollar price than they were in the mid-1970's. An important reason is that chicken has become more affordable relative to beef.

In addition, income changes have done little to strengthen the demand for beef in the 1980's. Although incomes have grown (tending to strengthen beef demand), they have grown more rapidly in the higher income groups, whose beef purchases are probably not very sensitive to increasing income.

In addition to changes in prices and incomes, many people have asserted that tastes for beef have changed. The premise is controversial, though, with economists coming out on both sides of it.

Tastes cannot be directly measured. However, most people can find circumstantial evidence to suggest that tastes have changed. First, there have been demographic shifts in the past 15 years. More women work outside the home, and there are more singles and single-parent families. So, consumption of beef cuts that take more time and effort to prepare could have declined.

Second, the technology of food preparation also has changed dramatically, especially with the widening use of the microwave oven. Finally, and perhaps most importantly, the medical community and the media have given much attention to the health benefits of avoiding cholesterol and saturated fats. Consumers claim that they are concerned about cholesterol and have cut back on red meat and other foods perceived to be high in fat.

Many in beef production and marketing believe that beef has been particularly hurt by the perception that it is a high

fat/cholesterol food. However, other observers dismiss health concerns as a major factor in the current weakness of beef demand. They point out that people's attitudes and actual behaviors are often contradictory. Total fat consumption has tended to increase despite consumers' professed concerns.

Also, opinion polls are often inaccurate measures of consumer tastes and poor predictors of behavior. People tend to tell a pollster what they believe the pollster wants to hear, or what they believe sounds virtuous. Given the media attention to cholesterol and saturated fats, many surveyed are likely to claim to be more concerned about cholesterol than their behavior would justify.

### **Taste Tests Inconclusive**

Although consumer tastes are not directly measurable, this has not prevented economists from attempting indirectly to measure the effects of taste changes on the demand for beef. Economists have both estimated the demand for beef and tested demand parameters to see if the demand relationships change over time.

These tests often show that demand relationships have changed, and that these changes have significantly decreased consumers' purchases of beef. However, if the researchers used the wrong demand relationships to explain consumer demand, the estimated parameters could change over time even if consumer tastes have not.

Researchers James Chalfant at Berkeley and Julian Alston, using a different technique—the economic theory of revealed preference—found no evidence of a consumer taste change.

Unfortunately, while their test could have demonstrated conclusively that tastes had changed, its ability to prove that tastes have been static is much weaker. Tastes, prices, and income could change simultaneously in such a

way as to be consistent with revealed preferences.

So, while there exist theoretical fixed tastes (coupled with price and income changes) that could explain the changes in beef consumption over the past 30 years, they may not be the actual tastes driving the current market for beef.

Whatever actual tastes are, beef consumption and prices are lower than they would have been under the conditions that existed 15 or 20 years ago. Whether this is due to increased competition from poultry and other meats or to declining tastes for beef, or some combination of the two, the effect on beef producers and marketers is the same: lower prices and lower consumption.

### **Is Advertising Effective?**

If tastes have changed, knowing why they have and how they might shift again would help the industry plan. Also, some people have linked the stability of tastes with the potential effectiveness of advertising. They argue that if tastes have been stable, advertising will not work. However, if tastes have shifted greatly, advertising will be effective.

Economists and others are on shaky ground when they try to relate what has happened to consumer tastes to the potential effectiveness of advertising. Even if tastes have changed in recent years, the shifts may have been caused by factors that advertising cannot influence. And, if tastes have been stable, that could be because there has not been enough advertising to shift them.

Major advertising campaigns for beef (and pork) started only in the late 1980's. Granted, if the bad publicity that red meat has received in the past 15 years has not affected beef demand, advertising may have no effect either. However, the best way to evaluate the potential effectiveness of beef advertising is actually to try it.

It is still too early to evaluate how the beef advertising program has affected consumer tastes for beef. A preliminary evaluation by Ron Ward at the University of Florida shows that beef consumption and prices have been unexpectedly higher since 1987 when changes in income and the prices of other goods are taken into account. That's when the promotional program began.

Other methods of expanding beef consumption are to lower its price by adopting new cost-saving technologies, and developing new products that use beef. Many beef producers are understandably more enthusiastic about advertising and new products than they are about technical innovation. But consumers would prefer cheaper beef and new products both. [Bill Hahn and Ken Nelson (202) 786-1710] **AO**

## Upcoming Economic Reports

### Summary Released Title

#### June

- 4 World Agriculture
- 7 Tobacco
- 12 World Agricultural Supply & Demand
- 14 Sugar & Sweetener Yearbook
- 19 U.S. Agricultural Trade Update
- 20 Agricultural Outlook
- 22 Livestock & Poultry Update  
Agricultural Resources-  
Land Values & Markets
- 27 Pacific Rim

## Where Is FmHA Headed?

**T**he lending policies of the Farmers Home Administration (FmHA) are under review as the 1990 farm bill works its way through Congress. Much of the farm credit debate has centered on how to define FmHA's mission or role as "the lender of last resort" for farmers and rural residents.

The last major reviews of FmHA's farm programs came under the Food Security Act of 1985 and the Agricultural Credit Act of 1987. The discussion this time has focused on how well these policy changes have worked and whether adjustments are needed again, given a different economic climate.

The cornerstone of the 1985 legislation for FmHA was a movement away from direct lending to guaranteeing loans made by other lenders. This policy aimed at reining in escalating loan program costs while helping FmHA customers graduate to private credit sources, as well as assisting other, less creditworthy farmers.

The Administration opened the 1990 farm bill debate with proposals to refine FmHA's mission. The changes would further target FmHA's direct lending to beginning and minority farmers and move away from keeping established farmers in business with credit subsidies.

Moving existing FmHA borrowers from direct loan programs to private credit often would involve the loan guarantee programs as an intermediate step. (Under a loan guarantee, should the farmer default, FmHA guarantees repayment of up to 90 percent of the loss on a qualifying loan made by an approved lender.) For farmers in need of temporary credit assistance because of financial difficulties, help would be available primarily through the guaranteed farm operating loan program.



This type of policy direction is consistent with the last farm bill and would move FmHA closer to its original mission, which stressed temporary supervised credit to beginning, tenant, or minority farmers.

As the farm bill wends its way through Congress, debate will continue on how much of a safety net should be provided by FmHA, and whether it should be provided through direct or guaranteed loans. Should FmHA credit programs be available to a wide segment of the farm population, or targeted to a just a few? What kind of credit programs can best address farmers' needs?

## Few Problems In the Early Times

FmHA's roots go back to the Great Depression and the social adjustment programs of the Resettlement Administration and the Farm Security Administration. These agencies made short-term operating loans and farm ownership loans to low-income or tenant farmers, based on a management plan the producer developed with county advisors.

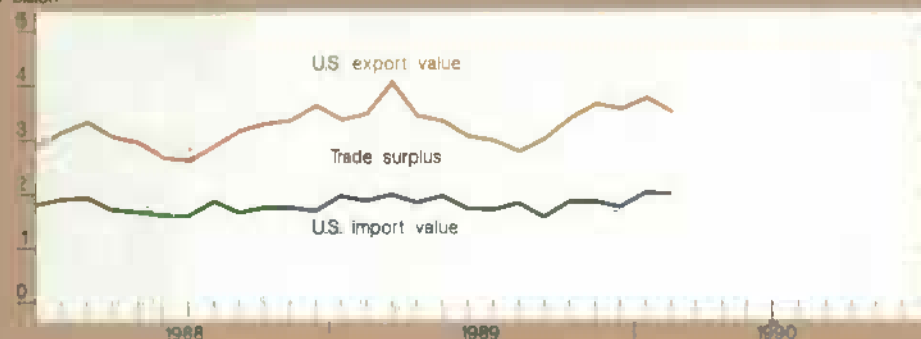
Legislation restructuring federal farm credit policies in 1946 created the Farmers Home Administration. It was given authority to make farm operating and ownership loans, emergency feed and livestock loans and, in 1949, loans to



## Farm Finance

### U.S. agricultural trade balance

\$ billion



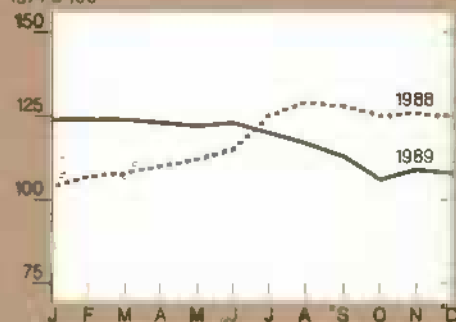
### Export volume

Million metric tons



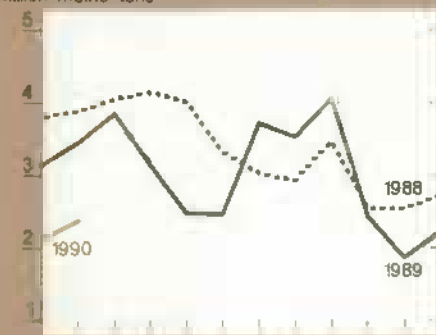
### Index of export prices

1977 = 100



### U.S. wheat exports

Million metric tons



### U.S. corn exports

Million metric tons



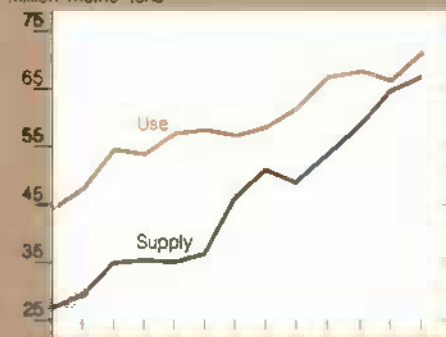
### Foreign supply & use of coarse grains

Million metric tons



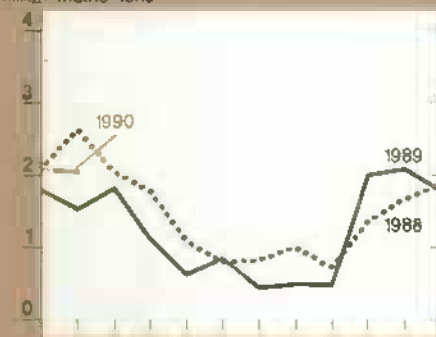
### Foreign supply & use of soybeans

Million metric tons



### U.S. soybean exports

Million metric tons



### U.S. share of world coarse grains exports<sup>1,2</sup>

Percent



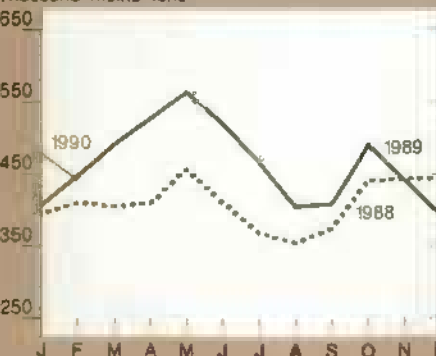
### U.S. share of world soybean exports<sup>1,2</sup>

Percent



### U.S. fruit & vegetable exports<sup>3</sup>

Thousand metric tons



<sup>1</sup>Excluding intra-EC trade <sup>2</sup>October-September years

<sup>3</sup>Includes fruit juices



help farmers recover from natural disasters.

But the emphasis was on farm operating and ownership loans to small, beginning, or tenant farmers. Loans were closely supervised by FmHA and designed to promote graduation to commercial credit.

The scope of programs changed little during the 1950's and 1960's. During the 1960's, annual farmer program lending ranged from \$500 to \$700 million and most loans were sound. At the end of the decade, FmHA held just 6 percent of the total outstanding farm debt.

## ***Dramatic Growth In the Go-Go Era***

The 1970's and early 1980's marked a sharp turn in FmHA's mission. New programs were introduced, eligibility expanded, and lending authority increased. Annual farm lending rose 1,200 percent during this period, peaking at \$8 billion. FmHA borrowers became continually dependent on FmHA credit, and graduation rates dropped.

Limits on ownership and operating loans increased to \$200,000, expanding FmHA's programs to large farms. Corporations and partnerships became eligible to borrow and it became easier to obtain multiple FmHA loans.

Lending rule changes allowed FmHA to make loans jointly with commercial lenders while taking a junior collateral position. Such changes not only expanded eligibility but increased the likelihood of FmHA losses. For some farms, FmHA indebtedness reached into the millions.

Special limited resource interest rates were introduced, which lowered the rate paid by eligible borrowers to below the government's cost of borrowing. Farmers also were allowed to obtain additional FmHA credit without showing the ability to repay their existing FmHA debt.

The evolution of emergency loans had perhaps the greatest impact on FmHA's mission. New legislation greatly expanded the availability of the emergency disaster program to farmers suffer-

ing from natural disasters. Previously, annual emergency disaster program lending had seldom reached \$100 million, but in the 1970's it soared, totaling \$5.1 billion by fiscal 1981.

In 1978, the economic emergency program was introduced to help farmers overcome hardships caused by credit scarcity or a cost/price squeeze. Both emergency programs were popular with farmers because they were relatively easy to qualify for and offered subsidized interest rates and loan amounts as high as \$500,000.

Lending under the two emergency programs totaled over \$20 billion during the peak period of 1978 through 1981. This sum was nearly equal to all lending by FmHA and its predecessors from 1935 through 1977.

The surge in liberal lending during the 1970's and early 1980's left FmHA with loans that quickly soured when the farm financial crisis began. Midyear delinquency rates soared from \$827 million (4.6 percent) of outstanding loans in 1980 to \$8.7 billion (37.1 percent) in 1989.

The emergency loan portfolio experienced the greatest problems. At the end of fiscal 1989, the programs had delinquency rates of 60 percent (economic emergency) and 44 percent (emergency disaster).

For nearly 5 years during the 1980's, FmHA was barred from making foreclosures by a class action lawsuit. The suit was a major factor behind the swelling delinquencies.

The combination of increased lending activity, the inability to foreclose, low graduation rates, and a decline in farm debt held by other lenders boosted FmHA's share of total farm debt to a peak of 16 percent in 1987. FmHA's share of non-real estate debt peaked at nearly 23 percent, making it second only to commercial banks for this category.

## ***Restructuring Is The Watchword***

FmHA tried to stem soaring delinquencies in the 1980's with a series of policies aimed at helping borrowers remain in farming. Hundreds of thousands of loans were restructured through consolidation, reamortization, payment deferrals, and interest rate reductions. A debt set-aside program allowed 16,000 borrowers to delay repaying loans for up to 5 years with no interest charges.

The Agricultural Credit Act of 1987 gave FmHA additional tools to deal with the massive buildup of delinquent loans. FmHA is now required to restructure all loans that are more than 180 days delinquent.

If other restructuring methods fail, FmHA must lower ("write down") the borrower's principal and interest to the calculated net recovery value of the collateral put up (market value less liquidation costs). If needed, the borrower can pay off the loan at this much-reduced net-recovery value. If foreclosure is the only option, the borrower can exercise lease-back or homestead protection rights.

Through such restructuring, FmHA's annual loan losses have grown steadily, reaching \$3.2 billion last fiscal year, or 14 percent of loan volume. In FmHA's first 50 years, by contrast, losses on loans amounted to only about 2 percent of cumulative lending.

Amid the farm financial stress of the mid-1980's, the 1985 farm bill called for scaling back FmHA's direct lending programs and putting greater reliance on guaranteed lending. Emergency disaster lending was sharply curtailed by more stringent eligibility requirements.

By fiscal 1989, new direct loan volume was only \$1 billion, the lowest since 1974 and, when adjusted for inflation, the lowest since the 1950's. Annual emergency lending is below \$100 million, despite major droughts. On the other hand, guaranteed lending volume has grown, totaling \$1.2 billion last year.

## Farm Finance

The 1985 switch to guarantees did not meet original legislative expectations—use has been flat for the last 2 years and only a third of 1989 lending authority was actually used or obligated (see the Farm Finance department in last month's AO).

Some in Congress are concerned that with declining direct lending authority and lagging guarantee use, some farmers are being denied needed help.

The upcoming farm bill likely will aim to increase guarantee program use, perhaps by encouraging greater private sector participation and making it easier for direct borrowers to graduate to guaranteed credit as an intermediate step.

[Steve Koenig (202) 786-1893] **AO**

## General Economy

### Inflation Surge: Temporary or Permanent?

**D**espite fears that the economy would sink into recession by early 1990, a moderate recovery in industrial production, continued employment growth, and an improving trade balance have substantially reduced the probability of a recession during the next 6 months.

The moderate growth, though, has been accompanied by the highest quarterly inflation rate in 8 years. A key issue in the outlook is whether the recent inflation spurt signals a higher inflation trend, or whether it is just temporary.

Recent USDA research suggests it's temporary. So, the outlook remains good for continued moderate growth. Inflation for the next 12-18 months should remain in the 3.5-4.5 percent range, and interest rates should be stable or fall slightly.

### Fourth Quarter Slow—First Quarter Picks Up

After the weakest quarter of real GNP growth since mid-1986, real GNP rose at a moderate 2.1-percent annual rate in the first quarter. Rebounding consumer auto demand, a 7.6-percent jump in business spending on new plant and equipment, and the first gain in residential construction since the fourth quarter of 1988 sparked the rise.

While real export growth slowed substantially in the first quarter, exports were still nearly 7 percent higher than a year earlier. Further, real imports declined in the first quarter. As a result, the real net export deficit improved by \$7 billion, to \$41 billion (1982 dollars)—the smallest since mid-1983.



Manufacturing production staged a modest comeback in the first 4 months of 1990, but manufacturing employment continued to slide. After falling to late 1988 levels in January 1990, production rose steadily through April. But the number of manufacturing jobs was about 200,000 lower in April than in December 1989.

Nonetheless, overall employment continued to rise slightly, and the civilian unemployment rate hovered around 5.3 percent during the first 4 months of the year, matching the 1989 average.

### Inflation Jumped

Inflation accelerated substantially in the first quarter, measured by both consumer and producer prices. Between December 1989 and March 1990, consumer prices rose at an 8.5-percent annual rate, while producer prices for finished goods rose 6.7 percent.

In contrast, consumer prices rose 4.8 percent in 1989 as a whole and only 3.4 percent at an annual rate in the second half of the year.

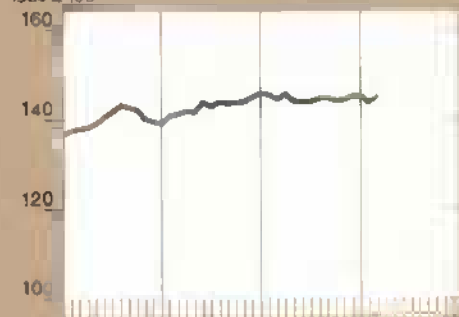
Several anomalous events in the first quarter sparked the upswing. In January, energy prices soared as demand jumped in response to the unusually cold

## General Indicators

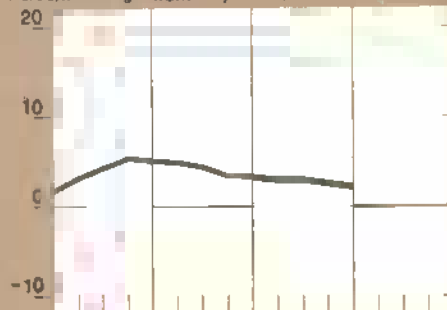
## General Economy

Composite leading economic indicators

1982 = 100

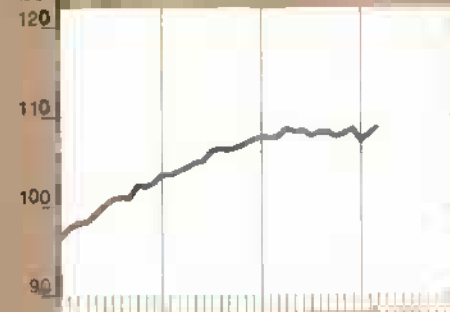
Gross national product<sup>1</sup>

Percent change from a year earlier

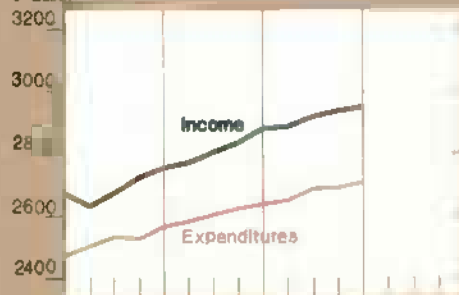


Industrial production

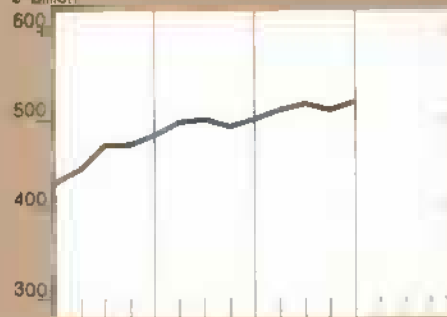
1987 = 100

Disposable income and consumption expenditures<sup>2</sup>

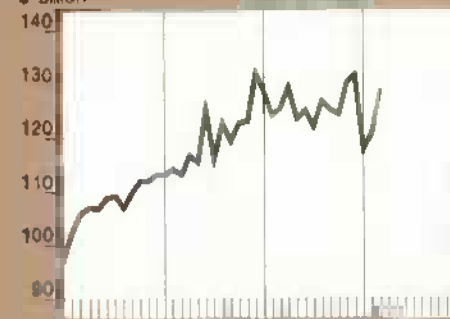
\$ billion

Nonresidential fixed investment<sup>2</sup>

\$ billion

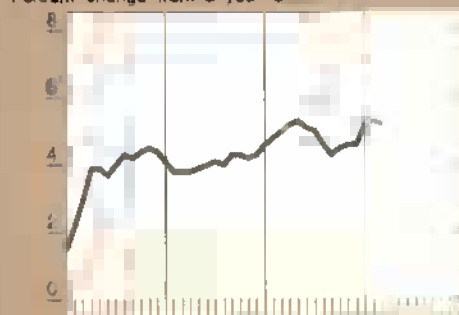
Manufacturers' durable goods orders<sup>3</sup>

\$ billion

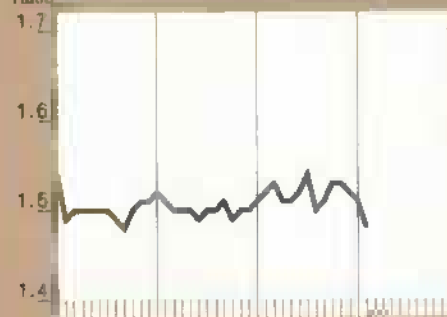


Consumer price index

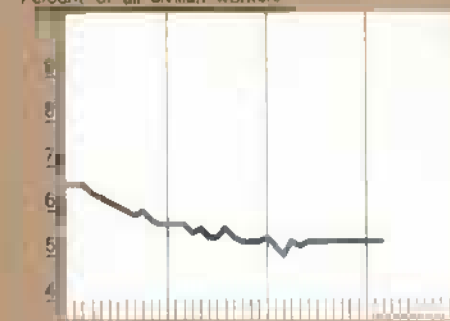
Percent change from a year earlier

Inventory/sales<sup>4</sup>

Ratio

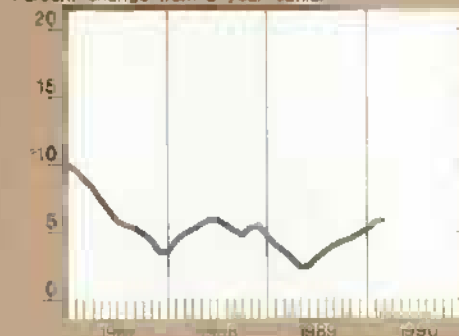
Unemployment rate<sup>5</sup>

Percent of all civilian workers



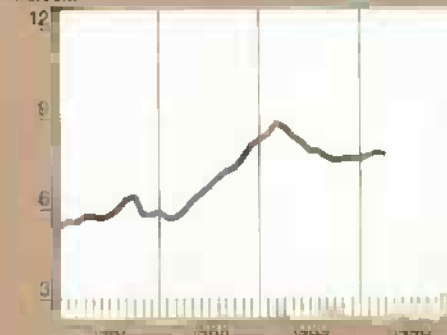
Money supply (M2)

Percent change from a year earlier



3-month Treasury bill rate

Percent

Savings rate<sup>6</sup>

Percent of disposable personal income

<sup>1</sup>Percent change from a year earlier in 1982 dollars. Seasonally adjusted annual rates. <sup>2</sup>Billions of 1982 dollars, seasonally adjusted at annual rates.<sup>3</sup>Nominal dollars. <sup>4</sup>Manufacturing and trade, seasonally adjusted, based on 1982 dollar. <sup>5</sup>Seasonally adjusted<sup>6</sup>Calculated from disposition of personal income in 1982 dollars, seasonally adjusted at annual rates

Sources: U.S. Dept. of Commerce, U.S. Dept. of Labor, and the Board of Governors of the Federal Reserve System



## General Economy

**December.** The cold snap also damaged fresh fruit and vegetable crops in the U.S., driving up their prices.

Inflation excluding food and energy prices, a measure of underlying inflation, worsened substantially as well. After a 4.2-percent annual increase in the second half of 1989, underlying consumer prices jumped 7.5 percent.

Unusual events also affected underlying inflation. Spring fashions were introduced earlier than usual, and caused apparel prices to jump in February and March. Analysts at the Bureau of Labor Statistics reported that 30 percent of the overall price increase in the first quarter was due to the 2-month increase in apparel prices.

Longer term interest rates have risen with the inflation acceleration, while short-term rates have been relatively stable. The rate on 3-month Treasury bills averaged 7.8 percent in April, about equal to the average for the preceding 6 months.

But 10-year Treasury bond rates have risen nearly half a percentage point since March. Analysts attribute the increase in longer term rates to expectations of higher inflation associated with the first-quarter inflation run-up.

### *Shocks Have Short-Run Impacts*

Consumer energy prices rose at a 14.8-percent annual rate in the first quarter, while food prices rose at a 13.7-percent rate. Those unusual price jumps raise some interesting questions. How do unforeseen events contribute to inflation in the short run and the long run? Will policymakers attempt to mitigate the effects of the shocks or will they simply let the effects work through the economy?

Supply or capacity shocks in particular sectors, such as the decrease in fruits and vegetables because of the December freeze, force temporary changes in the

overall price level. Supply or capacity shocks that affect many sectors simultaneously will have longer lasting effects.

Food and energy prices appear to be important contributors to short-run inflation, but they do not seem to contribute substantially to underlying inflation, according to USDA research.

A 10-percent increase in energy prices leads to a 0.3-percent increase in the overall CPI in the short run. And a 10-percent increase in food prices leads to a 1.3-percent increase in overall inflation in the short run. But, food and energy prices have statistically negligible effects on other prices.

The impact of food and energy price changes diminishes as the price measures broaden to include a greater proportion of more refined products. For example, the effect of food and energy shocks are largest for producer prices of crude goods, smaller for producer prices of finished goods, and even smaller for overall consumer prices, which include retail markups and the prices of consumer services.

In the longer term, inflation appears to be determined mostly by wage and price expectations and by money supply growth. Statistical tests suggest a one-to-one relationship between money growth (measured by M2) and inflation, albeit with long and variable lags.

Further, a 10-percent increase in the wage rate eventually leads to a 5.6-percent increase in the CPI. Food and energy price changes are not systematically related to wage changes.

Food and energy shocks might have longer term effects on inflation, however, if the Fed changes monetary policy. For example, the Federal Reserve could react to oil price increases or other short-run shocks by increasing the money supply in an effort to reduce the effects on the real economy. And there is some evidence that the Fed has done this in the past.

However, the Fed's current policy stance makes such a response unlikely. The Federal Reserve has made strong public

statements that it is not willing to let inflation accelerate and that it would like to push inflation down to where it is no longer a significant factor in business decisions.

Nonetheless, the fragile condition of a number of U.S. banks, S&L's, and insurance companies may pressure the Fed to be very careful about tightening the money supply to cut inflation.

### *Outlook Hinges On Inflation*

Even so, should the underlying inflation rate remain close to the first-quarter figure, the Federal Reserve likely would pursue a tighter monetary policy to try to wring inflation out of the economy. The result in the short run (12-18 months) probably would be higher interest rates (even adjusted for inflation), and slower growth in production and employment.

But, a severe enough tightening could precipitate a recession. Slower real growth should reduce the inflation rate with some time lag, but the economy temporarily would suffer higher interest rates and inflation coupled with sagging production and employment.

Agriculture could be hurt substantially in this environment, because high interest rates would push up farmers' interest expenses and weaker demand would drive down commodity prices. Macroeconomic factors could dominate agriculture-specific developments in determining the overall health of the sector.

A more likely alternative is that inflation will slow after the effects of the December freeze and oil-price spikes work themselves out. April's low 0.2-percent increase in consumer prices lends credence to this view. Continued moderate inflation should put downward pressure on interest rates and help prop up real growth.



Survey data for spending plans also tend to support this growth alternative. The January-March survey of anticipated spending on new plant and equipment suggests that real business investment will rise about 7.6 percent for 1990, higher than the 4.9 percent expected in the October-November survey, and only slightly lower than the 8.6 percent increase for 1989.

So, agriculture could instead be faced with slightly lower interest rates and moderate demand growth. In this macroeconomic environment, agricultural developments then would determine the overall outlook for the sector. [Ralph Monaco, Elizabeth Mack, and John Kiuchen (202) 786-1782] **AO**

## Rise in Farmland Values Moderates

**F**or 1990, USDA expects farmland values in the U.S. to continue up at a moderate 3- to 4-percent pace. The forecast incorporates expectations of near-record net farm income, slightly lower interest and inflation rates, and trends in farmland values.

However, weather, the looming 1990 farm bill, possible revisions in the capital gains tax, and the GATT trade liberalization talks all are uncertainties that will affect returns to land and land-value expectations over the next several years.

Nominal U.S. farmland values rose for the third consecutive year in 1989, but the 4-percent increase fell short of 1988's 6-percent gain. As of January 1, 1990, the per-acre value of farmland and buildings averaged \$693, still 16 percent below the record \$823 in 1982.

Because 1989's overall inflation rate was nearly 5 percent, it more than offset the 4-percent advance in farmland values. As a result, U.S. real farmland values actually fell slightly from a year earlier. Real farmland values have been virtually flat since 1987.

Several indicators underlie the modest rise in nominal values last year. Net farm income, the net value of current year's production, was record high in 1989. Net cash income (the net value of sales), while 7 percent below the 1988 record, still was the third highest ever.

Farm real estate debt and total farm debt continued a 6-year decline. Farm debt at the end of 1989 stood about 29 percent below its 1983 high. The ratio of farm debt to equity has declined steadily since 1985. Interest rates on farm real estate loans in 1989 averaged about the same as



a year earlier, but real rates were slightly lower because of higher inflation. However, these bullish indicators may have been offset by other factors.

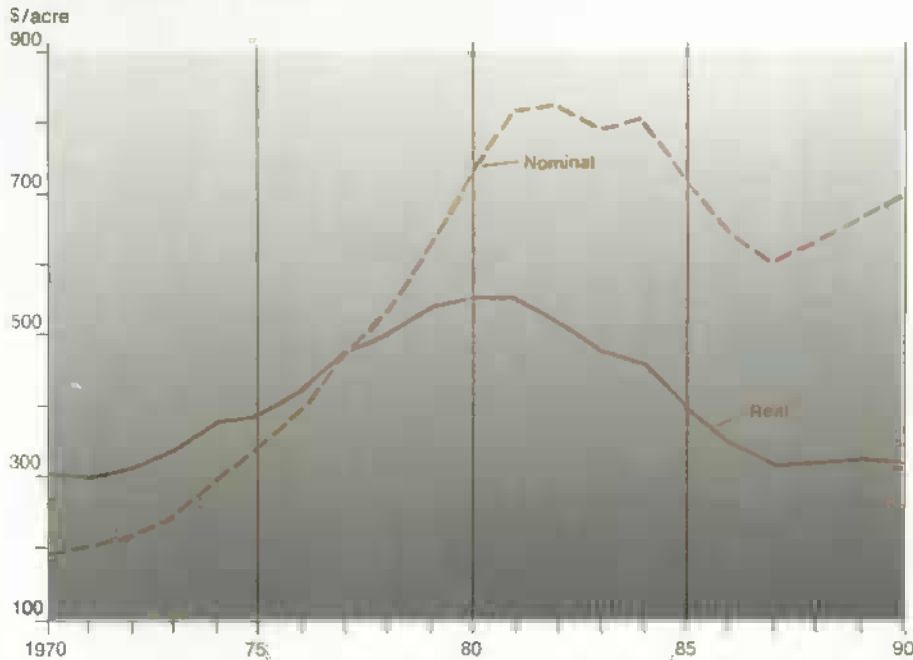
Returns on farm assets averaged between 4.5 and 5 percent over the past 3 years, while Treasury bills have earned close to 7 percent (8.2 percent in 1989). Treasury bills and other securities also provide more liquidity to those taking a wait-and-see attitude regarding farmland investments. Moreover, the cooling national economy in 1989 likely dampened demand for land for nonagricultural uses.

Although farmland values rose in 8 of the 10 U.S. farm production regions in 1989, value changes varied significantly within and among regions. Underlying these national indicators is a blend of factors that affect each region's land values differently.

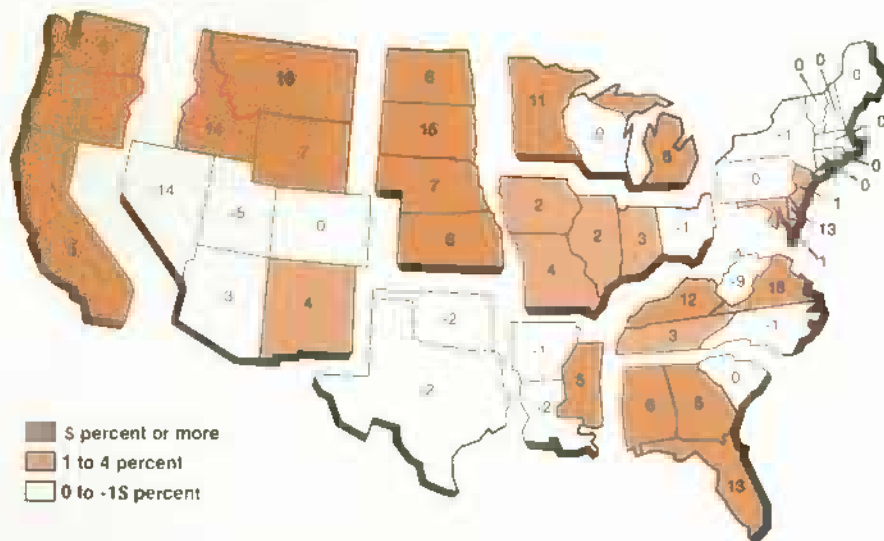
A key factor is the mix of demands for land. In some regions, land is primarily demanded for agricultural uses. But in the east and west coast regions, a variety of demands—agricultural, suburban, urban, recreational, and retirement—is present. This diversity helped maintain farmland values in these regions during the mid-1980's when values in other regions fell sharply.

## Resources

### Nominal Farmland Values Still Rising, But Real Values Flat



### Farmland Values Grow Most In N. Plains, Pacific, Southwest



February 1, 1989 to January 1, 1990 in contiguous U.S.

### N. Plains and the SE Show Strongest Gains

Favorable wheat prices and record cattle prices helped boost average farmland values in the Northern Plains by 8 percent in 1989, following gains averaging 10 percent in the 2 preceding years. Increases ranged from 6 percent in North Dakota to 15 percent in South Dakota. Grazing land values in particular were higher in 1989.

Values in the Southeast also averaged 8 percent higher in 1989, partly because of favorable commodity and cattle prices. The current regional average is record high.

Varied demand for land in Appalachia helped raise the region's 1989 average 7 percent to a record high. Strong increases in northern Virginia, particularly around urban areas, led to an 18-percent gain for the state. West Virginia's 9-percent drop in land values was partly attributable to lower values for woodlands, which account for nearly 40 percent of the state's land in farms.

Minnesota's 11-percent gain contributed to the Lake States' 6-percent increase, similar to the region's increase a year earlier. But even with higher values over the past 3 years, the current regional value of farmland remains nearly 30 percent below the 1981 peak.

Most Corn Belt states showed only moderate increases in values in 1989, compared with strong gains in 1987 and 1988. Value changes during 1989 ranged from a 1-percent decline in Ohio to a 4-percent gain in Missouri. Overall, the region's average rose only 2 percent in 1989, compared with 10- to 11-percent gains in the 2 preceding years.

Cropland dominates farmland uses in the Corn Belt, and 1989 cropland values there were unchanged to moderately higher in 1989. Lower corn and soybean prices may have been a factor in holding down values. Market performance in 1989 suggests the strong recovery during the past 2 years in the region's farmland values may be leveling off.

Lower soybean prices likely also contributed to the modest 1-percent gain in the Delta States' farmland values. Increases in the 2 preceding years averaged about 3 percent annually.

Lower grazing land values in Oklahoma and Texas pushed 1990 farmland values down 2 percent in both states. The Southern Plains is the only region where farmland values have not rebounded since the farm financial crisis. Current regional values remain about 25 percent below their 1985 high.

Values in the Mountain region averaged 5 percent higher, led by strong increases in Montana (16 percent), Idaho (14 percent), and Wyoming (7 percent). All three states have a large proportion of grazing land, and grazing land values were substantially higher in 1989. Conversely, the Nevada average was off 14 percent, pulled down by lower grazing land values there.

The Pacific region's value averaged 6 percent higher, similar to the 5-percent gain a year earlier. Oregon showed strong increases (11 percent) with substantially higher pasture values, but also higher values for other uses. Washington and California values averaged 5 to 6 percent higher, similar to gains in 1988.

A slowing in the Northeast's economy seems to have dampened recent gains there. While the regional average showed no change in 1989, state values ranged from a 1-percent drop in New York to a 13-percent gain in Delaware. [Roger Hexem (202) 786-1422] AO

## First-Quarter Food Prices Up

**T**he first-quarter 1990 Consumer Price Index (CPI) for food rose at an annual rate of 13.7 percent.

The sharp increase can be attributed primarily to fresh fruit and vegetable prices. Stronger prices for dairy products, pork, and beef also contributed.

First-quarter food prices are expected to be the highest for the year; declines are likely in each of the last three quarters. For all of 1990, the CPI for food is expected to average 3 to 5 percent above 1989.

Fresh vegetable prices averaged nearly 29 percent higher in January-March than the previous quarter. Most of the



increase in fresh fruit and vegetable prices occurred in January, following the freeze that destroyed vegetable and citrus crops in Florida and Texas. Fresh vegetable prices, particularly tomatoes, rose

### Fresh Fruit Prices Lead the Way Up

	1987	1988	1989	Forecast 1990
Consumer Price Indices			Percent	
All food	4.1	4.1	5.8	3 to 5
Food away from home	4.0	4.1	4.6	3 to 5
Food at home	4.3	4.2	6.5	3 to 5
Meat, poultry, & fish	6.4	3.5	5.0	3 to 5
Meats	7.1	2.4	4.0	5 to 7
Beef & veal	7.6	5.5	6.4	2 to 4
Pork	8.2	-3.0	0.6	8 to 12
Other meats	6.3	2.6	2.8	5 to 7
Poultry	-1.5	7.2	9.9	-1 to -4
Fish & seafood	10.6	5.8	4.5	3 to 5
Eggs	-5.9	2.3	26.6	-7 to -10
Dairy products	2.5	2.4	6.6	4 to 6
Fats & oils	1.5	4.6	7.2	2 to 4
Fruits & vegetables	8.8	7.6	8.5	7 to 10
Fresh fruits	11.3	8.3	6.6	14 to 17
Fresh vegetables	12.9	6.3	10.7	5 to 7
Processed fruits & veg.	3.5	7.9	6.3	3 to 5
Processed fruits	4.1	10.3	3.2	5 to 8
Processed vegetables	2.7	4.8	10.7	0 to 2
Sugar & sweets	1.8	2.7	4.7	3 to 5
Cereals & bakery products	3.5	6.4	8.4	5 to 7
Nonalcoholic beverages	-2.6	0.0	3.5	3 to 5
Other prepared foods	4.2	3.7	6.4	3 to 5

Source: Historical data, Bureau of Labor Statistics, forecasts, ERS.

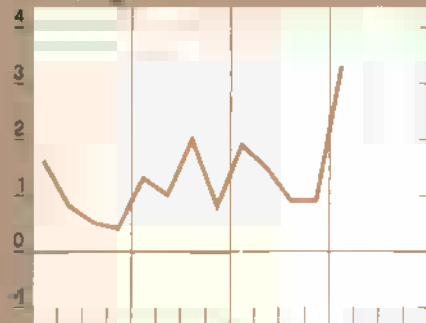


## Food &amp; Marketing

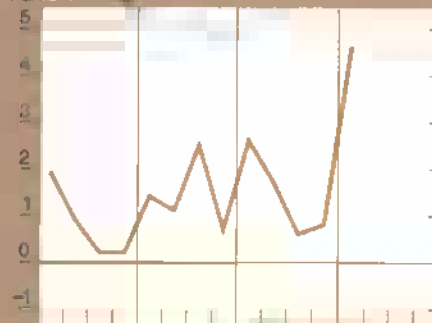
## Marketing Indicators

**CPI: Total food<sup>o</sup>**

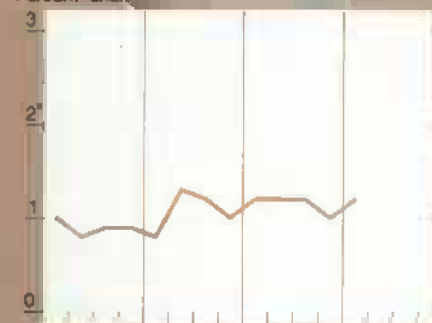
Percent change

**CPI: Food at home<sup>o</sup>**

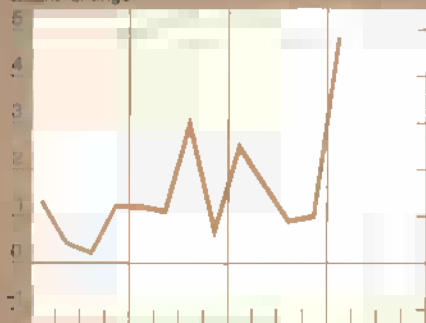
Percent change

**CPI: Food away from home<sup>o</sup>**

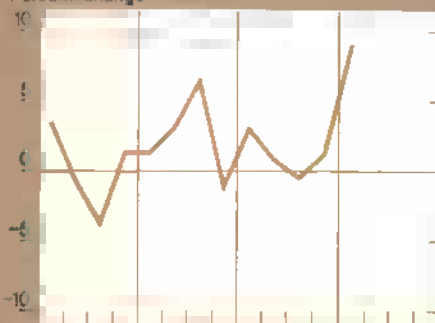
Percent change

**Retail cost of food<sup>1</sup>**

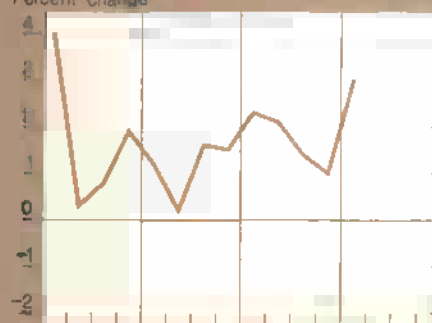
Percent change

**Farm value of food<sup>1</sup>**

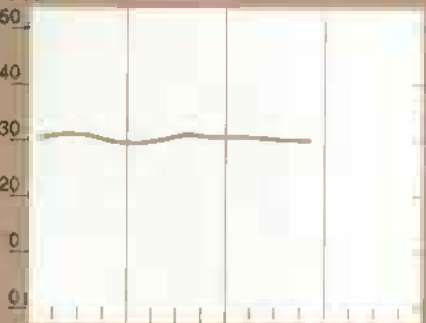
Percent change

**Farm-retail spread<sup>1</sup>**

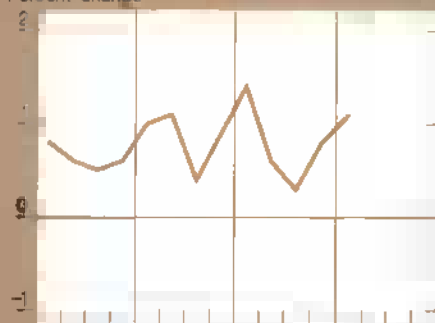
Percent change

**Farm value/retail cost<sup>1</sup>**

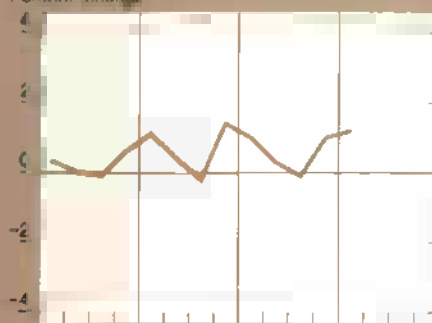
Percent

**Food marketing cost index<sup>2</sup>**

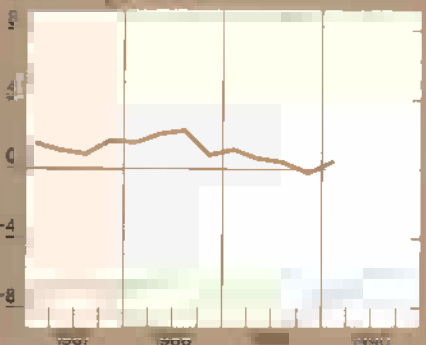
Percent change

**Index of hourly earnings<sup>3,4</sup>**

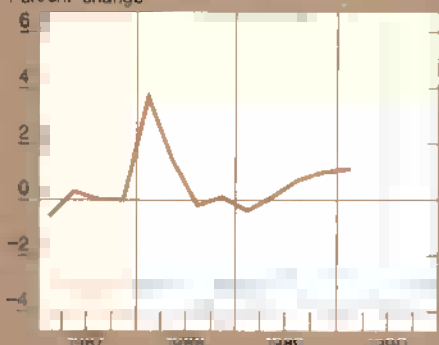
Percent change

**Index of packaging prices<sup>4</sup>**

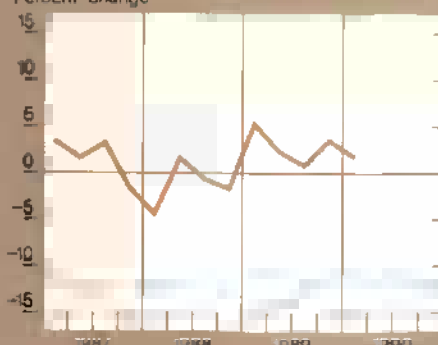
Percent change

**Index of rail freight rates<sup>4</sup>**

Percent change

**Index of energy rates<sup>4</sup>**

Percent change



<sup>o</sup>CPI unadjusted <sup>1</sup>Index based on market basket of farm foods <sup>2</sup>Index of changes in labor, packaging, transportation, energy, and other marketing costs

<sup>3</sup>In food retailing, wholesaling, and processing <sup>4</sup>Component of food marketing cost index

All series expressed as percentage change from preceding quarter, except for 'Farm value/retail cost' chart.

sharply in January and February, but then declined in March as production began to recover.

With the exception of potatoes, fresh vegetable prices will continue to retreat as spring and summer crops become available. Until the fall harvest, potato prices should remain high; tight supplies resulted when stocks were depleted following the 1988 drought. Fresh vegetable prices are expected to average 5 to 7 percent higher in 1990 than in 1989.

### ***Fresh Fruit Prices Jump***

Because of the freeze, fresh fruit prices, particularly grapefruit and strawberries, rose in January and then leveled off for the rest of the quarter. Oranges for the fresh market are grown in California, so the freeze affected fresh orange prices only slightly.

Nevertheless, most of the fresh market oranges that were grown in Florida and Texas were diverted to processing, causing some fresh market shortfall and slightly higher prices.

Fresh fruit prices likely will remain high for the rest of 1990. Warm weather in March caused apple and peach trees to bloom early and subsequent frosts caused wide damage. Early crops will be smaller as a result. With greater prices for citrus and some noncitrus fruits, the fresh fruit CPI is expected to average 14 to 17 percent higher in 1990 than in 1989.

The smaller Florida orange crop meant reduced domestic production of frozen concentrated orange juice. As a result, prices for orange juice will be higher, pushing the processed fruit index up 5 to 8 percent.

Beef production in the first quarter was down more than 4 percent from the previous quarter, and retail prices were up 3 percent. Although cattle on feed numbers were high in the first quarter, fewer were marketed, accounting for the smaller production. Strong consumer demand, along with smaller supplies, pushed retail beef prices to record highs in the first quarter.

With large numbers of cattle on feed, marketings are expected to set a record in the second and third quarters. Beef supplies will gain and retail prices will slip. For all of 1990, retail beef prices will average 1 to 3 percent above 1989.

### ***Dairy Prices Are Slipping***

Retail prices for dairy products peaked in February, following last autumn's peaks in wholesale and farm milk prices. For the first quarter, retail dairy prices rose 5 percent from the last quarter of 1989 and

were up almost 12 percent from a year earlier.

Retail dairy prices began dropping in earnest during April, and are expected to continue slipping for the rest of the year. Higher milk output and the loss of export markets for nonfat dry milk are boosting domestic dairy supplies.

However, unusually brisk demand for cheese is now absorbing much of the supply response. If demand continues to be strong for the year, the annual CPI for dairy will average 4 to 6 percent above 1989. [Ralph Parlett (202) 786-1870] **AO**

## Special Article

# Japan's Food Security: Reality & Illusion

**I**n Japan, food security is closely linked to self-sufficiency in rice. Despite declining per capita consumption, rice is still the most important food item in the diet. While its share of the gross value of agricultural production in Japan has fallen in recent years, it remains about one-third of the total.

However, rice is more than just a food. In fact, it has permeated Japanese society, culture, and politics, having been a staple for more than 2,000 years (see the accompanying box).

Until the early 1960's, the consumption of rice was slowly rising. But, since 1962 annual per capita consumption has fallen from about 126 kilograms to 77 in 1989. And, expenditures on rice by urban households have fallen even more, from 10 percent of total living expenditures in 1960 to less than 2 percent in 1989.

Virtually all rice consumed in Japan is produced domestically. The Japanese Food Agency (JFA) controls its distribution and limits imports to insignificant quantities. As a result, Japan's rice sector is one of the most protected agricultural markets in the world, with producer prices currently averaging five to seven times world trading prices.

Overall government assistance to Japan's rice producers in 1989 exceeded \$20 billion, about 60 percent of government transfers to agriculture. Japan's negotiators justify the heavy assistance as necessary for food security.

Although most observers agree that food security is a legitimate national concern, many argue that for Japan it can be achieved in a less trade-distorting way. Japan's approach could be replaced, for example, by a stocking scheme that could provide a similar degree of food security more cheaply and with less distorting effects on world markets.

Indeed, large, stable Japanese stocks and a more open market, combined with a reformed world trading environment, would ensure access to rice at world prices.

## Food Security Worries Have Long History

Shortages during World War I and sharp increases in rice prices led to riots in 1918, which broke out in most urban areas in Japan. In response, the government began a drive towards self-



sufficiency through the Rice Production Development Program. At the time, self-sufficiency was defined to include Japan's overseas territories, mainly the imperial colonies of Taiwan and Korea.

The program was successful in stimulating domestic rice production and in raising Japan's imports from its colonies. Overall, net imports increased from approximately 5 to 20 percent of domestic consumption between 1915 and 1935.

But the solution to the food shortage problem only made the poverty of Japanese farmers worse. The increased production and imports caused the domestic farm price to decline as much as 40 percent in the mid-1930's.

In 1933, a large surplus pushed the government to revamp its rice policies through the Rice Control Law. The new law granted the Japanese government the authority to buy and sell rice in unlimited quantities and set price floors and ceilings. The government also extended the production control program to its colonies.

Despite the new policies, incomes paid to urban and industrial workers were moving ahead of incomes earned by farmers. Farmers called for more assistance. These demands were met by increasingly restrictive border measures; Japan's domestic rice prices were 14 percent above world prices during 1918-22, and 45 percent above world prices during 1933-37.

## Hunger in the 1940's Exacerbated the Problem

During World War II, Japan's government passed the Food Control Act of 1942, which put the distribution of rice and most



## The Influence of Rice On Japanese Society

Many observers have noted that even though Japan is perhaps the most urbanized of any major country, it remains a village society. And a substantial part of the village society stems directly from the rice culture.

For centuries, Japanese rice culture has depended on irrigation. Rice farming began on small plots, where the development of irrigation was an absolute necessity. This mandated cooperative action on the part of villagers, with farmers dependent on each other for labor. The agricultural society of Japan evolved under these conditions; the security of the group was heavily dependent on the individuals fulfilling their commitments.

The effects of the village on modern urbanized Japan are still evident. Even the largest cities are organized into little neighborhoods much like villages. Both official and unofficial group activities tend to tie the individual to others in his own neighborhood in much the same way that irrigation activities did in the past.

And, Japan's corporations invariably have annual ceremonies that are reminiscent of the yearend village ceremony at which the head of the Japanese farming community would hand out ceremonial rice-cakes and sake.

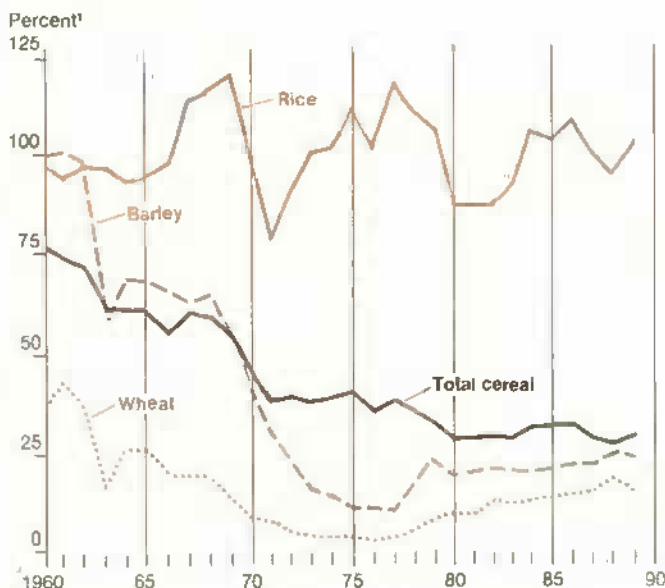
Both the Shinto religion and sumo wrestling, the national sport of Japan, have at least some of their origins in rituals that were devised to seek divine protection for the rice crop.

The Emperor even tends rice paddies on the grounds of the Imperial Palace in Tokyo. While the Emperor's actions are clearly symbolic, they represent the ties of Japan to its agricultural past in general and to preservation of the rice culture in particular.

foods under government control. However, hunger in the cities became widespread toward the end of the war.

Domestic production fell and imports were cut off. Those individuals who could went to live with relatives in the countryside, where food was somewhat more available. Those who could not leave the cities suffered the most, having to manage in many cases on the official ration of two cups of rice a day. And the food problems stretched past the end of the war.

Although Still Self-Sufficient in Rice, Japan Relies on Imports for Other Cereals



<sup>1</sup>Ratio of production to domestic consumption, multiplied by 100.

Major agricultural reforms, including land reforms, were put in place as the Occupation government began to address the problems of rural poverty and structural reform. While postwar economic growth solved the problem of poverty in Japan, it has done little to remove the psychological scars of those who were hungry during the war.

The Occupation also gave birth to the current political system—a system that makes it especially hard for the Japanese to alter their rice policies because of powerful special-interest groups. Even with some recent political reforms, rural votes count for more than urban votes.

The ruling Liberal Democratic Party (LDP) still owes much of its strength to the farm vote. Seventy percent of its seats in the Diet, in fact, are held by members representing rural and semi-rural districts.

## Rural Incomes Get a Boost

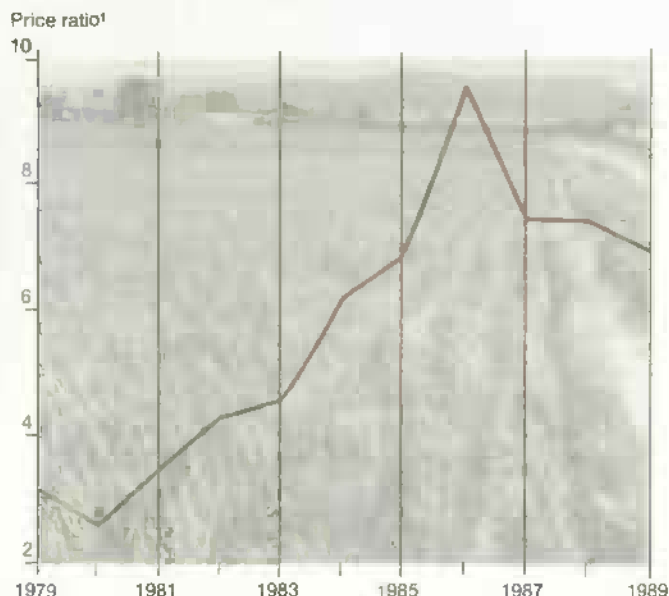
During the 1950's, with food more available and national per capita incomes growing, raising rural incomes became a priority. Because the urban-rural income gap was widening, the government in 1961 passed the Agricultural Basic Law. Among its objectives were removing the income disparity, while reorganizing production to be more efficient.

The new law led to a rapid increase in domestic producer rice prices. Between 1960 and 1968, domestic rice prices doubled.

While the higher prices pulled up farmers' incomes in the 1960's, a growing reliance on off-farm employment kept farm household incomes moving up when prices subsequently

## Special Article

## Japanese Rice Prices Are Seven Times World Trading Prices



<sup>1</sup>Ratio of Japanese procurement price to Thai milled rice, 100% 2nd grade, f.o.b. Bangkok.

flattered. Since the mid-1970's, domestic rice prices adjusted for inflation have fallen. And, the government cut price supports in 1987 and 1988 for the first time.

Incomes for farm families are now roughly a third higher than those of nonfarm families. And farmers derive only about 13 percent of their income from agricultural sources. With Japanese farms very small—the average is 1.2 hectares—off-farm income will remain a necessity for keeping farmers' incomes high.

### Self-Sufficiency Drops, But Not for Rice

Food security has broad public support in Japan. Politicians and farm groups have used this concern to galvanize support for protectionist agricultural policies. This approach serves farmers, but does not provide broader public with adequate supplies of low-cost food.

Japan's stated food security policy is assuring "domestic supply capability for food by improving productivity, to the greatest extent possible, despite such limitations as the scarcity of land." This meant providing heavy production support that led to rice self-sufficiency in the late 1960's.

While it has achieved rice self-sufficiency, Japan now imports about 55 percent of its total food consumption on an original calorie basis, because the diet has shifted away from rice to livestock products. The original calorie basis reflects, for example, feed imports that sustain domestic meat output.

Indeed, Japan's expanding domestic production of beef, pork, and poultry has depended on massive imports of feed grains. This has led to a drop in self-sufficiency in feed grains.

Japan has been reminded of its dependence on raw material imports, including food, by external trade disruptions. The most notable agricultural example was the 1973 U.S. soybean embargo. U.S. soybean exports to Japan were cut off for about a week; exports were limited for several months thereafter.

Although Japan's soybean imports reached record levels that year, tampering with the flow of a vital agricultural commodity had an enduring psychological effect. And other such disruptions, even those that do not directly affect Japan, heighten the nation's sense of insecurity.

As a result, Japan has pursued a food security policy that has included stockpiling basic feedstuffs and aimed to diversify sources of food supply. Stockpiling cereals, principally feedgrains, is periodically emphasized, usually at times of high world prices. Large livestock inventories are viewed as a kind of "living grain stockpile."

Japan's interest in diversifying food supply sources was motivated by dependence on the U.S., Australia, and Canada for about two-thirds of its food imports in the early 1970's. After the 1973 U.S. soybean embargo, Japan took steps to encourage diversification of food supply sources through foreign investment, the most publicized of which was in Brazil's soybean industry. But 15 years later, Japan is still as dependent on its top three suppliers as it was in the early 1970's.

### Japanese Diet Becoming Westernized

At one time, the Japanese diet consisted of rice, vegetables, and fish. Currently, though, rice represents only one-third of Japan's caloric intake, down from 50 percent in 1960.

Increasingly, the Japanese diet has become westernized, with meat, eggs, and dairy products all becoming more important. Over the last two decades, numerous polls among schoolchildren—who regularly choose hamburgers as their favorite food—indicate that the trend away from rice consumption likely will continue. Self-sufficiency in rice no longer assures as much food security for the Japanese population as it once did.

The stark reality is that Japan's population has outstripped the carrying capacity of its land. Even if all available agricultural land were cultivated in rice, Japan would fall far short of producing enough calories to sustain its current population. Rice is presently cultivated on 2 million hectares of a 5.5-million-hectare agricultural land base. Potential rice output would be even less if trade in farm inputs were blocked.

Japan's limited resources and its dependence on trade suggest that its fundamental food security interests lie in keeping the

global trading system as open as possible. A free global trading system expands trade opportunities and could reduce world trading price instability, both of which are in the interests of Japan's consumers—the price of rice could drop by more than 50 percent.

### *An Alternative*

#### *Approach: Freer Trade*

An alternative to Japan's rice self-sufficiency policy could eventually provide the nation with a similar level of food security at less than half the cost and also would reduce trade distortions. The alternative might include these features:

- building up a 12-month revolving stockpile of rice over a designated period of time; and
- liberalizing Japan's rice market by imposing, at first, high tariffs on rice; then reducing the tariff over some transition period to a low or negotiated level, coupled with a tariff-rate quota expanded over time to improve access to the Japanese market.

What lends credibility and broad support to Japan's food security argument is the nation's nervousness about continuous access to supplies. If major players in the GATT want Japan to adopt an alternative to its food security policy, they need to support changes in the GATT rules and guarantee strict compliance with those changes.

This would include such changes as a revision of Article XI to prohibit export restrictions, even temporary ones, that are currently allowed. Such an action would help alleviate the chances that Japan's food imports would be interrupted.

Since Japan and other countries have used food security as a justification for certain trade-distorting agricultural and trade policies, the GATT needs to define food security and provide guidelines on permissible ways of achieving it. Japan's case suggests that self-sufficiency should not be accepted as a means to achieving food security when cheaper, less trade-distorting alternatives are available. [Bill Coyle and Larry Deaton (202) 786-1610] AO

## Brazilian Sugar At a Crossroads



The long-term outlook for Brazil's sugarcane-based sugar and ethanol industry is clouded. In mid-March, the new president, Fernando Collor de Mello, announced sweeping economic reforms based on a more market-oriented approach to managing the economy. Subsidies have been largely eliminated in all sectors, or are anticipated to disappear shortly.

This process is expected immediately to cut domestic ethanol demand, because consumer prices have jumped and the government's asset freeze has cut consumers' spending power. There is also talk of liberalizing the domestic gasoline distribution system. This could further alter the relative cost of ethanol.

Starting in 1975, the Brazilian government, facing sliding sugar prices and high oil prices, made the decision to use domestic sugarcane to produce ethanol and shift the domestic auto industry into producing cars that ran on ethanol or gasoline, an ethanol/gasoline mix. But the decision is now haunting the country.

World sugar prices are up and oil prices are down. Pushed by government policies to control domestic prices, and higher prices for other crops, cane output stagnated, an ethanol shortage developed, and Brazil's sugar exports failed to meet expectations. Indeed, Brazil has elected to export sugar to the U.S. to keep its share of the quota, and then import U.S. ethanol for its cars.



## Special Article

Brazilian automobile manufacturers, acting on the tight ethanol supply situation and increasing consumer preference for gasoline-powered cars, have drastically shifted their production mix from 95/5 ethanol/gasoline to 30/70.

However, about 4.5 million vehicles run on ethanol (roughly 50 percent of the fleet). So Brazil's policymakers have no choice in the short run but to ensure an adequate supply of ethanol.

A drop in sugar prices, or an increase in the cost of petroleum in the near to medium term, would place the Brazilian ethanol sector on firmer footing. But, sugar and oil analysts generally do not foresee such major changes in the relative prices of these commodities soon.

A central unresolved question in world sugar markets is whether Brazil will reassert itself as a major sugar exporter in the 2-million-ton-plus range or increasingly become a residual supplier to world markets after domestic sugar and ethanol needs are met.

The Collor government is faced with the difficult task of charting a course which balances the competing economic interests of its regionally diverse sugarcane-sugar-ethanol industry. Or perhaps the government may radically alter the industry's composition over the long run as it seeks to cut government spending and intervention in all markets.

If world sugar prices stay high and oil prices stay low for the long term, a contraction in the ethanol-powered fleet and higher sugar production would enable Brazil to capture a larger share of the world market.

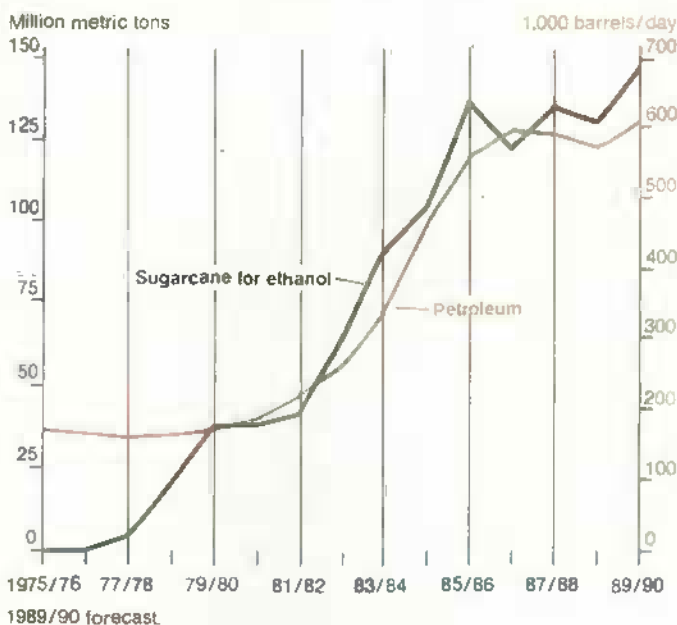
### Sugarcane Output To Be Flat in 1990/91

Brazil is the world's third largest sugar producer, behind India and the USSR, and the largest sugarcane producer. For the 1989/90 (June-May) marketing year, the Brazilian Institute of Sugar and Alcohol (IAA) initially planned production of 7.4 million metric tons of sugar and 13.3 billion liters of ethanol. These figures represented a 13-percent decrease and a 14-percent increase, respectively, over 1988/89 output.

However, because the government lacked strict control over available 1989/90 cane supplies, ethanol production is now expected to reach only about 11.7 billion liters, unchanged from 1988/89. And, sugar output is forecast to be off as much as 1 million tons from last season's 8.5 million.

Brazil's 1989/90 sugarcane production, according to the government, yielded 260 million tons of unprocessed cane from 4.1 million hectares, largely unchanged from the previous season. An estimated 147 million tons was used to make ethanol, 73 million for sugar, and the remainder went to forage and non-commercial uses. About 73 percent of cane production and two-thirds of the area were in the central-south states. The remaining output came from the north-northeastern states.

### Brazilian Sugarcane for Ethanol & Petroleum Production Has Tripled in Last Decade



### Brazil's Sugar Exports Drop 1/

Year	Sugar production	Domestic consumption	Consumption as share of production	Exports	Exports as share of production
	- 1,000 metric tons -		Percent	1,000 metric tons	Percent
1975/76	6,180	5,177	83.5	1,244	20.4
1980/81	8,547	6,107	71.5	2,305	27.0
1985/86	8,270	6,300	76.2	2,560	31.0
1986/87	8,650	6,700	77.5	2,086	24.1
1987/88	8,457	6,400	75.7	2,131	25.2
1988/89	8,582	6,600	76.9	1,371	16.0
1989/90 2/	7,500	6,700	89.3	1,500	20.0
1990/91 3/	7,500	6,850	91.0	1,100	14.7

1/ All sugar data converted to raw value. Consumption and export shares may not add to 100 percent because of stock changes.

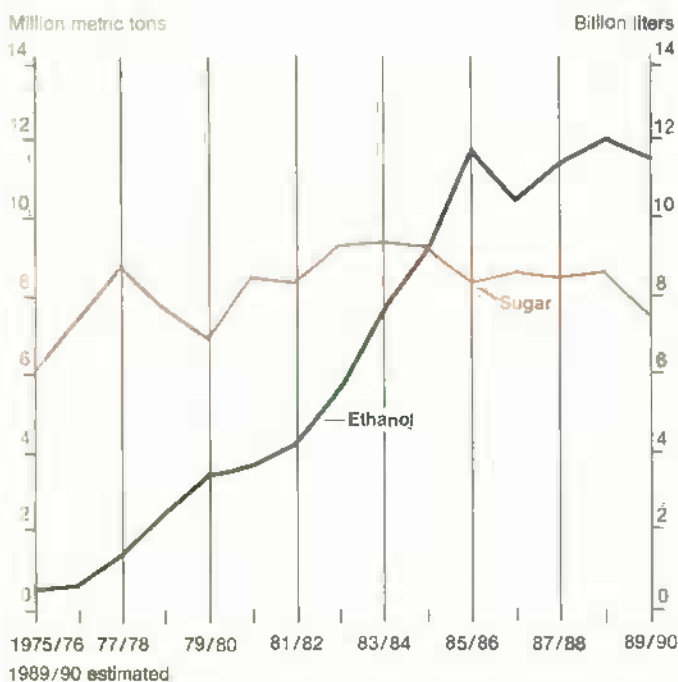
2/ Preliminary. 3/ Forecast.

Sources: Brazil's Institute of Sugar and Alcohol (IAA), and USDA.

Some reduction in cane output was reported in the central-south states from midyear frosts and dry conditions. But, recovery of the north-northeast crop, after drought problems in 1988, more than compensated. For the central-south, some reports show that 1.2 million hectares, or 30 percent, were harvested to produce sugarcane for sugar, while the remaining area harvested was largely for ethanol.

Because domestic and world sugar prices were more favorable vis-a-vis domestic ethanol, some millers cut ethanol production and shifted cane to sugar. Thus, sugar output is estimated to have exceeded somewhat the government's authorized 1989/90 production, while ethanol fell well short of the initial target.

## Brazilian Sugar Output Slumped After 3 Years of No Growth



## Sao Paulo State Is Largest Producer of Brazilian Sugar and Ethanol



States Producing at least 5 percent of ethanol  
States Producing at least 5 percent of sugar

Based on 1988/89 production figures.

Moreover, some observers report that the season's exact amount of sugar production is not known because of significant contraband sugar exports through Paraguay.

For the 1990/91 production cycle, USDA forecasts steady Brazilian sugar output of 7.5 million tons, despite continued strong world sugar prices and a milling capacity to produce 10-11 million tons of raw sugar. Next season's ethanol output, according

## Regional Disparities Add a Wrinkle

Brazil has two geographically distinct producing regions with important agronomic differences and policy orientations. The central-south region is dominated by the state of Sao Paulo, which alone accounts for over 50 percent of Brazilian sugarcane production. The region in recent years has supplied three-quarters of the country's cane and over two-thirds of Brazil's sugar output.

In addition, the central-south produces approximately 85 percent of the domestic ethanol to service its large industrial centers and urbanized population. The central-south cutting season is normally May through September, although cutting began in mid-April again this year to ease the tight ethanol supply situation. Last season, the early cutting depressed yields.

The cane area is located on generally level, highly productive land that readily lends itself to mechanization. Sugar produced in the central-south region goes predominantly to the domestic market. The central-south cane-sugar-ethanol industry is generally described as efficient and cost effective. Some research shows the region as having the sixth-lowest production costs in the world.

The north-northeastern states account for 20 to 25 percent of Brazilian sugarcane production, approximately one-third of the country's sugar output, and about 15 percent of its ethanol. The cutting season there is normally November through March, and north-northeastern sugar production goes largely to the export market via the ports of Recife and Maceio. The region accounted for an estimated 95 percent of total Brazilian sugar exports in 1989.

The cane-sugar-ethanol industry there is considered less efficient, and has traditionally depended heavily on government programs. A large proportion of its cane is on steeply rolling hills, largely precluding the use of mechanized equipment.

The soils are reportedly not as productive as in the central-south states and drought is more frequent. Cane yields in the north-northeast are about 30 percent lower than those in the central-south states, according to Brazilian statistics.

to industry sources, is not projected to increase from 1989/90's 11.7 billion liters. Harvested sugarcane area both for sugar and ethanol is expected to be unchanged at 4.1 million hectares.

Lack of financial incentives has resulted in a failure to expand area for several years. A rising number of independent cane

## Special Article

producers are reportedly opting either to shift land to other, more profitable crops or to rent it to sugar or ethanol mills.

### *Brazil Leads in Ethanol Output*

While the country's installed milling capacity for ethanol is approximately 16 billion liters, it now appears that only 75 percent of that will be used to produce ethanol in 1990/91.

Assuming an average 75 liters per metric ton of cane for direct ethanol production and 10 liters per metric ton for indirect production (via molasses from the sugar production process), 1990/91 ethanol production may require an estimated 150 million tons of sugarcane.

Domestic ethanol consumption, supplemented by imports, is estimated at about 13 billion liters for 1989/90, but is expected to decline to about 12 billion in 1990/91, largely due to anticipated higher consumer prices.

Imports of ethanol, nonetheless, are likely again during 1990/91, at least to rebuild a strategic reserve. Some observers expect ethanol imports to reach at least 500 million liters. While a significant source of those imports is again expected to be corn-based ethanol from the U.S., some will be wine ethanol from the EC and wood-based methanol from Chile.

Despite its current problems, Brazil is by far the world's leader in ethanol production. No other country comes close. U.S. ethanol output, the world's second largest, totaled only 3.1 billion liters in 1989, and that was a near record.

Drawing on Brazil's vast resources of land, rural labor, and its highly favorable natural conditions for sugarcane growth, the country has more than doubled its sugarcane area, and more than tripled its sugarcane production since 1975.

Through a program of adding distilleries to existing sugar mills, and constructing more efficient distilleries devoted strictly to converting cane to ethanol, Brazil increased its ethanol production from half a billion liters in 1975/76 to 11.7 billion in 1989/90.

Brazil's ethanol program, with both subsidized production and consumption, has come under considerable criticism for its cost, particularly given the sharp downturn in world oil prices since 1986. According to energy specialists, the cost of producing ethanol is \$40-\$60 a barrel of oil equivalent, compared with around \$20 a barrel for domestically produced oil.

Moreover, domestic oil production has increased significantly over the last decade, growing from 187,000 barrels per day in 1980 to 610,000 in 1989, according to Petrobras, the state oil company. On the other hand, higher domestic oil production, lower oil import prices, and the ethanol program helped cut Brazil's oil import bill from a record \$11 billion in 1981 to \$3.4 billion last year.

Despite these changes, the ethanol program's future seems assured in the short term. The program has been a key component of the nation's effort to industrialize, and turning away from ethanol means significant capital losses. Since its inception 15 years ago, over \$18 billion has been invested in ethanol production.

The Brazilian government has been subsidizing the production and marketing of ethanol-powered cars, which through 1987 comprised more than 90 percent of the new cars manufactured and sold in Brazil. This proportion slipped to 84 percent in 1988 and 75 percent in 1989. According to press reports, government oil and sugar representatives have concluded that the pure ethanol share of all cars manufactured should fall to 30-50 percent to keep vehicle production in line with future ethanol availability.

Over the past 18 months, Brazil has begun to pull back from the ethanol program in other ways. While the official production target of 16 billion liters in 1992 is in place, government and industry are taking steps to dampen the growth in demand by:

- reducing the ethanol content of gasohol from 22 percent to 18 and then 12;
- allowing pure ethanol fuel to be diluted by up to 5 percent with gasoline; and
- reducing the price advantage that was given to ethanol at the pump over gasoline.

### *Exports Take a Back Seat*

The world's sixth largest population and a long tradition of high per capita sugar consumption have made Brazil one of the globe's leading sugar-consuming countries.

With annual consumption of 6.85 million tons forecast for 1990/91 (about 6 percent of global use), Brazil ranks behind only the Soviet Union, the EC, India, China, and the U.S. in total annual sugar use. In recent years, per capita consumption has hovered around 43 kilograms, compared with a world average of about 21 kilos.

Brazilian governments have consistently given priority to ensuring that domestic production is sufficient to cover consumption needs. Retail sugar prices are kept in check. In April, the retail price for a kilo (2.2 pounds) of sugar was Cr \$28.00, or 55 cents.

As a controlled price item, sugar generates demand that is somewhat insulated from the full impact of Brazil's high inflation. With the nation's strong expected population growth and increasing industrial demand, even greater sugar supplies will be needed. For 1990/91, consumption is forecast to total 91 percent of production. That's compared with 76 percent in 1985/86 and 71 in 1980/81.

Despite taking a back seat to domestic consumption, Brazil has been consistently among the world's top five sugar exporters, along with Cuba, the EC, Australia, and Thailand. During



1977/78-87/88, Brazil's sugar exports averaged 2.7 million tons a year. Record exports of 3.4 million tons in 1984/85 accounted for 11 percent of global trade.

Moreover, Brazil has a diverse sugar export portfolio; it ships raw sugar to the U.S. and the USSR, exports plantation white or semi-refined sugar (known as crystal sugar in Brazil) mainly to developing country markets, and sends refined sugar mainly to markets in the Middle East and North Africa.

The evolution of a diverse export capability, unique in the world at this volume, provides Brazil with considerable flexibility to serve a wide range of markets as well as the varied needs of individual importers.

For example, in 1989, Brazil shipped Egypt 48,414 tons of raw sugar, 66,000 tons of semirefined, and 36,804 tons of refined—an order no other country in the world could fill.

Sugar export earnings have continued to be important to Brazil's economy, though their share of total earnings has shrunk as exports of minerals, manufactured products, and other agricultural commodities have grown. In 1989, sugar exports of \$306 million provided only 1 percent of total export earnings of \$23.4 billion. That's down dramatically from the 1975 boom, when sugar exports of \$1.1 billion represented 12.6 percent of total exports.

Nonetheless, Brazilian sugar exports have averaged \$342 million annually over the past 5 years, and are important to the debt-ridden Brazilian economy—especially the impoverished northeast, where roughly 95 percent of the exports originate.

Starting with the 1987/88 season, Brazil's sugar exports have fallen below 2 million tons. They are forecast to dip to 1.1 million in 1990/91, according to some USDA reports. While this means less sugar for the world market at a time of rising prices, it also reflects the strong domestic food and fuel demands on Brazil's sugarcane-sugar-ethanol industry.

Cane processors in the central-south states, for example, for some time have pushed for the north-northeast to handle a larger share of domestic ethanol requirements, while sugar interests in the north-northeast would like to continue to expand sugar production for export.

In an important policy decision, the Brazilian government, after many false starts, finally carried through with privatization of the sugar export sector in June 1989. Prior to that, sugar export sales were under the exclusive control of the IAA.

Export privatization and high 1989 world sugar prices led many millers, principally in the north-northeast, to forgo ethanol production in favor of sugar. This tendency may continue unless ethanol production becomes price competitive with sugar, through higher internal ethanol prices or a reduction in sugar prices. [Peter Buzzanell (202) 786-1888] **AO**

## Upcoming Releases From the Agricultural Statistics Board

The following list gives the release dates of the major Agricultural Statistics Board reports that will be issued by the time the next *Agricultural Outlook* comes off press.

### June

- 1 Egg Products  
Minn.-Wisc. Mfg. Grade Milk-Final 1987-89
- 5 Poultry Slaughter
- 6 Dairy Products
- 7 Celery
- 8 Vegetables  
Vegetables-Annual
- 12 Crop Production
- 15 Turkey Hatchery
- 18 Milk Production
- 19 Cattle on Feed
- 21 Catfish  
Cherry Production-Tentative
- 22 Cold Storage  
Livestock Slaughter  
Vegetables
- 25 Eggs, Chickens, & Turkeys
- 27 Peanut Stocks & Processing
- 28 Acreage  
Grain Stocks
- 29 Hogs & Pigs  
Agricultural Prices  
Agricultural Prices-Annual

## Special Article

# Farm Bill Taking Shape

Congress has begun deliberations on the 1990 omnibus farm bill, which will replace or reauthorize annual price support and production control programs scheduled to expire after the 1990 crops. (To compare the various farm bill proposals, see the spreadsheet following this article.) The process begins with bills introduced in the House or Senate, which are then referred to the House Agriculture Committee or the Senate Committee on Agriculture, Nutrition, and Forestry.

The committee chair may assign each bill to a subcommittee for initial hearings and amendments by its members. During these hearings members discuss the bill, calling for testimony from expert witnesses, government officials, and special interest groups.

Each subcommittee "marks up" its section of the bill by debating, amending, and voting on specific wording. Once it clears the subcommittee, the bill is sent to the full committee for ratification. The full committee may hold additional hearings or mark-up sessions. The committee also works to incorporate any related bills and amendments into one comprehensive, omnibus bill.

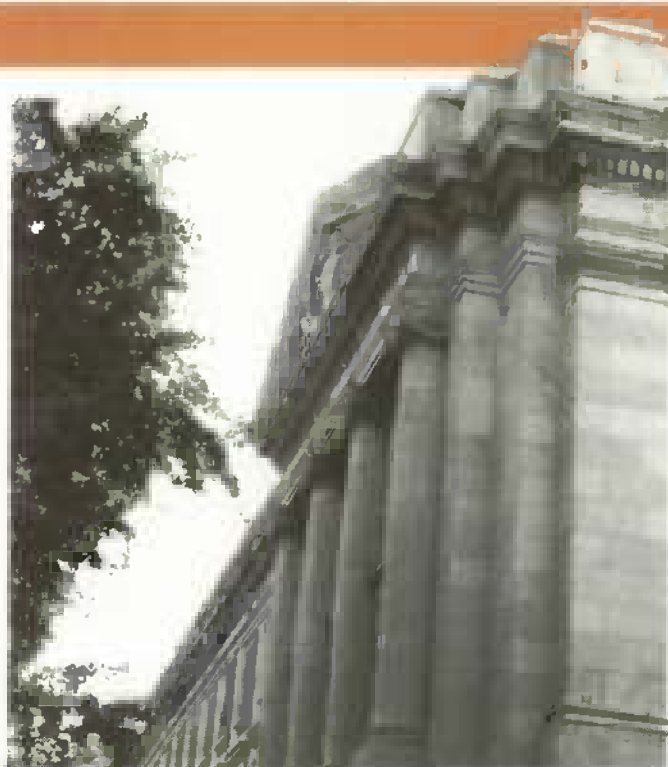
Once accepted by the committee, the farm bill will "go to the floor" along with the committee's report for consideration by the full House or Senate. On the floor, other Representatives and Senators may propose amendments and debate the merits of any part of the bill. When the Senate and House pass their two versions of a farm bill, a conference committee, with members of both chambers, is formed to work out any differences.

## Senate Side Has Begun

Then the bill returns to the floor for ratification by the entire Congress. When passed, it is sent to the President for signature or veto; once signed, the bill becomes law.

Several comprehensive farm bills have been introduced in the Senate. For example, Senator Richard Lugar (R.-Ind.) introduced a bill (S. 2292) that incorporates many of the Administration's proposals for renewing and refining federal farm programs. Lugar's proposal also calls for freezing target prices at 1990 levels.

Lugar's bill gives farmers more flexibility to respond to market signals by allowing program participants to shift freely among program crops and oilseed plantings. Participants could shift without losing their current crop base history, while continuing to receive deficiency payments according to their historical plantings.



Lugar's bill also would continue the current law's market orientation, aggressive export promotion, environmental protection, and support of farm income.

The bill of Senator Rudy Boschwitz (R.-MN) is also market oriented. The bill (S. 2251) would be in place for 7 years (1991-97) instead of the usual 5. No acreage reduction program would be authorized, and a new recourse loan option has been proposed as a form of subsidized credit. Boschwitz also proposes a "guaranteed deficiency payment," in which producers lock in their deficiency payment at the time of sign-up.

The full Senate Agricultural Committee has already begun marking up bills. Thus far, it has approved a trade title that would consolidate most commercial trade authorities under one statute.

This trade title would reform P.L. 480 (the Food for Peace Program) by providing food grants to the poorest countries and streamlining the bureaucratic process. The President could spend up to \$3 billion to forgive the debts of the poorest nations borrowing under the Food for Peace Program.

In addition, the title proposes creating a "Food for Freedom" program to help new democracies. It also seeks to curb unfair competition by strengthening the Export Enhancement Program (EEP).

The Senate Agricultural Research subcommittee has voted to fund more research on protecting water from contamination by farming practices. Producers also would receive more

information about how they can prevent such contamination. And a new office of water policy coordination would be created to oversee research and education and to develop a national water plan.

The research subcommittee also voted to give a boost to alternative farming techniques that reduce the use of toxic chemicals, approving \$40 million in new spending. In addition, the proposed legislation includes a global warming section, calling on USDA to study the effects of climate change on food crops and forests.

## House Works on Overall Bill

In the House, Representative E. ("Kika") de la Garza (D.-Tex.) introduced a comprehensive farm bill, H.R. 3950, as a mark-up vehicle, leaving the details up to the agriculture subcommittee. The bill, as proposed, is very similar to current law.

The Wheat, Soybeans, and Feed Grains subcommittee has adopted amendments to H.R. 3950 that would increase target prices beginning in 1992 based on changes in the index of prices paid by farmers (production items, interest expense, taxes, and wages), and would increase target prices 2.55 percent for each 2.5-percent increase in the acreage reduction requirement above minimum levels.

Adopted amendments also would set basic loan rates at 85 percent of the respective 5-year average market prices, excluding the high and low years. The Secretary would have discretion to lower loan rates according to a schedule based on stocks-to-use ratios.

Members of the subcommittee also adopted a provision that would allow farmers to harvest oats planted on set-aside acres and receive deficiency payments for the oats if aggregate oats production did not exceed projected domestic demand.

Another proposal adopted would initiate oilseed marketing loans that could be repaid at the lesser of (1) the adjusted world market price, or (2) the loan rate. The 1991-95 soybean loan rate would be set at \$5.50 per bushel.

However, for 1992-95 crops, soybean loan rate adjustments could be triggered by changes in the stocks-to-use ratio. If the ratio were under 25 percent, loan rates would increase by 5 percent; if the ratio were over 25 percent, loan rates could drop by 5 percent.

The marketing loan rate for canola, rapeseed, safflower seed, flaxseed, mustard seed and other oilseeds would be designated by the Secretary and set at not less than 10.5 cents per pound. This marketing loan rate would be adjusted in the same manner as for soybeans. In addition, the subcommittee's proposals would require aflatoxin testing for all corn exports.

The Livestock, Dairy, and Poultry subcommittee voted to increase the milk support price to a minimum of \$10.60 per cwt

and create a quota system to deter farmers from overproduction. Operating as a checkoff program, a two-tiered price structure would give a higher support price for a certain percentage of the milk and a lower price for the rest. Each of these programs would be triggered by specified levels of projected surplus.

The House dairy proposal is very different from the Bush Administration's proposal, which is to keep the current price support formula intact with some additional flexibility.

The House's Cotton, Rice, and Sugar subcommittee voted to increase rice and cotton target prices by the percentage change in the Consumer Price Index, minus 2 percentage points, beginning with 1992 crops.

For rice, the subcommittee voted to freeze the target price at \$10.71 per cwt for the 1991 crop, and to maintain the minimum loan rate at \$6.50 per cwt for the 1991-95 crops. It also proposed freezing the 1991 crop cotton target price at 72.9 cents a pound, and to maintain the minimum loan rate at 50 cents a pound for 1991-95 crops.

A proposal by Congressman Jerry Huckaby (D.-LA) would modify the present sugar program by providing for a minimum sugar import quota and raising the federal price-support levels for domestic sugar. The Huckaby proposal also contains three other measures:

- it would bar any nation that is a net importer of Cuban sugar from exporting sugar to the U.S.,
- it would provide Caribbean Basin countries a 5-cent premium on sugar they send to the U.S. for refining and re-export, and
- it would peg changes in the price-support program to changes in the CPI, minus 2 percentage points.

## Budget Committees Hunker Down

At the same time that the House and Senate agriculture committees have been marking up the farm bill, the budget committees have been working on the fiscal 1991 budget. Under the House's budget proposal, the Agriculture Committee would need to cut \$8.6 billion from the Congressional Budget Office baseline budget for the next 5 fiscal years—including \$900 million in 1991, \$1.7 billion in 1992, and \$2 billion in each of the following 3 years.

As the farm bill proposals enter full committee, the agriculture committee members will need to reduce estimated expenditures from the current marked up sections by billions of dollars.

Two ways the House may consider achieving these budget savings are by reducing the acreage on which government payments to farmers will be made, or by excluding producers with gross or net incomes over a specified amount. [Lori Lynch and Susan Pollack (202) 786-1689, and John Craven (202) 447-8831] **AO**



## Special Article

## Major Field Crop Programs:

## Current &amp; Proposed Legislation

1. Current statutes (primarily the Agricultural Adjustment Act of 1938 & the Agricultural Act of 1949, as amended by the Food Security Act of 1985)

*Authorize programs for wheat, feed grains (corn, grain sorghum, oats, barley, & rye), upland cotton, extra long staple cotton, rice, & soybeans through the 1990 crops.*

*Current commodity programs reflect movement toward more market orientation.*

*The Administration & Congress generally agree that these statutes provide a good foundation for the 1990 farm bill.*

## Acreage Reduction

Paid Land Diversion (PLD), Set-Aside Programs, & unpaid Acreage Reduction Programs (ARP's) are authorized by current statutes.

ARP's & PLD's restrict the acreage that participants can plant to any one program crop. Set-aside programs differ in that a certain portion of a farm's normal acreage is idled & any of a group of crops can be planted on any proportion of the remaining acreage.

An ARP has been used for each major program crop in each year that current programs have been in effect. ARP's require program participants to reduce plantings by a specified portion of their crop acreage bases (prior years' acreage that was planted or considered planted to the program crop). ARP's also require participants to maintain their reduced acreage in conserving uses.

Set-Aside Programs have not been used since the 1970's. Voluntary PLD programs have not been used in recent years but were used in the mid-1980's to assist in reducing stocks.

## Price Support Loans

Price support is provided to program participants through direct purchases & nonrecourse loans on program crops, primarily the latter. In addition, extended nonrecourse loans & government storage payments for wheat & feed grains are provided through the Farmer-Owned Reserve.

Basic (statutory) loan & purchase rates for most program crops are 75-85% of a 5-year moving average of market prices, dropping the high & low years. Thus, loan rates are tied to market conditions. However, an annual basic loan rate may not be set lower than 95% of its year-earlier value. Cotton & rice loan rates may not fall below 50 cents/lb. & \$6.50/cwt.

For wheat & feed grains, actual (Findley) loan & purchase rates can be set as much as 20% below the basic loan rate if the Secretary determines that market conditions warrant.

"Marketing loan" provisions, which allow for loan repayments at discounted rates, are mandatory for cotton & rice & may be implemented at the Secretary's discretion for the other major field crops.

2. Food & Agricultural Resources Act of 1990 • H.R. 3950 • de la Garza & Madigan

*This bill provides the House Agriculture Committee with a broad draft for its subcommittees to flesh out. To the extent that it is complete, H.R. 3950 is similar to the Food Security Act of 1985.*

ARP for wheat: if ending stocks are greater than 1 billion bushels, acreage base reduced 20-30%; if less than 1 billion bushels, acreage base reduced by 20% or less. Feed grains: if ending stocks are greater than 2 billion bushels, ARP between 12.5 & 20%; if between 1.8 & 2 billion bushels, ARP 10-12.5%; if 1.8 billion bushels or less, ARP 10% or less. Upland cotton: if ending stocks are 4 million bales or more, ARP of up to 25%. Rice: if ending stocks are 30 million cwt, ARP of up to 35%.

PLD & Set-Aside Program are at the Secretary's discretion.

Basic (statutory) loan rate would be set at 75-85% of a 5-year moving average of market prices, dropping the high & low years. Actual (Findley) rate could be set as much as 20% below the basic rate at the Secretary's discretion. Marketing loans would continue to be mandatory for cotton & rice & at the Secretary's discretion for other program crops.

Soybean support price would equal 75% of simple average price received by producers for previous 5 marketing years (excluding highest & lowest), but price support could not be reduced more than 5% in any year. Minimum soybean support price would be \$4.50 per bushel.



## Wheat, Feed Grains, Cotton, Rice, & Soybeans

### Producer Flexibility

The Secretary has discretion to allow producers to increase a crop acreage base by up to 10% if there is a corresponding decrease in another crop acreage base.

For 1990, soybeans, sunflowers, or safflowers may be planted on up to 25% of permitted program crop acreage without loss of program base acres. Also, approved nonprogram crops (sunflowers, safflowers, canola, rapeseed, others) may be planted on up to 20% of permitted program crop acreage (crop acreage base less ARP) without loss of base if: (1) at least 50% of the permitted acreage is planted to the program crop for harvest, & (2) deficiency payments are not received on permitted acres (0/50-92 acres) that are maintained in conserving use.

Another statute allows oats to be substituted for other program crops without loss of crop acreage base history.

### Income Support

Except for soybeans & rye, income support is provided through deficiency payments that are made when average market prices fall below target price levels. Income support is not provided for soybeans or rye.

Deficiency payments are calculated by multiplying a payment rate times a program payment yield times the number of acres for payment.

The payment rate is either the difference between the target price & the national average price received by farmers for a specified portion of the marketing year, or the difference between the target price & the national average nonrecourse loan rate, whichever difference is smaller.

Program payment yields are calculated as the average of farm program payment yields for the 1981-85 crop years, excluding the highest & lowest years. The Secretary may use the preceding 5 years' actual harvested yields in calculating program payment yields, but has chosen not to do so.

### Payment & Loan Limits

Current statutes impose a \$50,000-per-person payment limit for deficiency & land diversion payments received under the annual wheat, feed grain, upland cotton, extra long staple cotton, & rice programs. Disaster assistance payments under annual programs are limited to \$100,000 per year.

A \$250,000 aggregate limit applies to the annual program payments, resource adjustment payments, disaster payments under annual programs, & any gain realized from repaying a loan for a crop at less than the original loan level.

A separate \$50,000 limit applies to annual rental payments that can be received under the Conservation Reserve Program.

H.R. 3950 would continue the flexibility options of current statutes (mandated by the Disaster Assistance Act of 1989 & P.L. 101-81).

The bill would continue deficiency payments calculated as now. Target price minimums would be: wheat, \$4/bu.; corn, \$2.75/bu.; upland cotton, 72.9 cents/lb.; & rice, \$10.71/cwt.

The bill would continue current payment limitation statutes.

## Special Article

## Major Field Crop Programs:

## Proposals

**3. The Food Security Act of 1990 - S. 2292 - Lugar**

*This bill contains proposals originating from the Bush Administration to continue the course charted in the 1985 Food Security Act, i.e., market-oriented agriculture, aggressive promotion of exports, & environmental protection. S. 2292 also would continue to support farm income through target prices.*

*S. 2292 differs from the 1985 farm bill in that it would provide for planting flexibility with a normal crop acreage base for each farm, allowing planting of any program crop & oilseeds without loss of payment eligibility & historical base. It also would change the Acreage Reduction Programs & base them on stocks-to-use ratios with lower maximum ARP levels for grain than the Administration's proposal.*

## Acreage Reduction

ARP's could be authorized for program crops if supplies were excessive. For wheat & feed grains, ARP levels would be determined by the ratio of ending stocks to total use. For wheat, the ARP would be 0-5% if ending stocks were less than 40% of use, & 5-10% if stocks exceeded that level. Feed grains' trigger level would be 25% of use. (These are lower ARP minimums than proposed by the Administration.)

For cotton & rice, ARP's would be set to achieve a stocks-to-use ratio of 30% for cotton & 20% for rice. The maximum ARP's for these crops would be 20%. PLD's also would be authorized. ARP's for oilseeds would not be authorized.

On acres idled under an ARP, producers could plant the program crop for which the ARP was established, but not other program crops or oilseeds. For each program crop acre so planted, farmers would give up 1 acre of deficiency payments (as in the 1990 wheat program). Conserving, experimental, & industrial crops also could be planted & harvested, & also would require offsetting loss of deficiency payments.

## Price Support Loans

All nonrecourse loan rates would be set with a similar formula: 75-85% of a 5-year moving average of market prices, dropping the high & low years. However, basic loan rates could not drop more than 5% per year. An additional 20% cut would be allowed if necessary to make crops competitive in the international market. The bill maintains a minimum loan rate of \$4.50 for soybeans. For cotton & rice, marketing loans would be mandatory, as under current law, but present minimum loan rates (50 cents/lb. & \$6.50/cwt, respectively) would be eliminated.

The Farmer-Owned Reserve (FOR) would shift to 9-12 month contracts instead of the current 3-5 year contracts. FOR participants would receive fixed storage payments, paid quarterly. A maximum level of 300 million bushels for wheat & 600 for feed grains would be established. Farmers could enter or exit the FOR freely, but storage payments could be discontinued when prices went above 140% of the loan rate.

**4. Farm Flexibility Act of 1990 - S. 2251 - Boschwitz**

*This bill would continue the present farm legislation's emphasis on market orientation. It is a 7-year bill for 1991-97.*

No ARP would be authorized. PLD's would be targeted at environmental concerns, with enrollment based on bids.

Recourse (harvest) loans would be set by the Secretary at 75-85% of the 5-year moving average farm price, dropping the highest & lowest years. This loan would have to be repaid in full plus interest. Recourse loans would not be available for oilseeds. Nonrecourse loan rates would be set at 80-100% of recourse loan rates. Marketing loans would be mandatory for cotton & rice, but would be at the Secretary's discretion for wheat, feed grains, & oilseeds.

Payment rates for storage in the Farmer-Owned Reserve would be the same as the CCC pays commercial warehouses. There would be no release triggers; contracts would be up to 18 months long; & storage payments would be made as long as prices were below 150% of the nonrecourse loan rate.

## Wheat, Feed Grains, Cotton, Rice, & Soybeans

### Producer Flexibility

A normal crop acreage (NCA)—equal to the sum of the crop acreage bases for wheat, feed grains, cotton, rice, & historical plantings of oilseeds—would serve as an overall limit on planted acreage for each participant. Participants also would have to comply with any individual crop ARP requirement.

Payment acres for the 1991-95 crops would equal the individual farm program acreage for the 1990 crop year. Producers could plant & harvest any combination of program crops & oilseeds on their payment acres without losing deficiency payments.

Conserving crops, such as alfalfa, could be planted but not harvested. Farming other alternative crops on payment acres might be allowed but producers would have to forego deficiency payments on those acres.

To counter short supplies, participants could be permitted to plant up to 105% of their NCA. If a crop were in excess supply, it could be excluded from the NCA & assigned an individual base & ARP.

### Income Support

Target prices would be set at 1990 levels for the duration of the farm bill.

### Payment & Loan Limits

Deficiency payments would be subject to a limit of \$50,000 per person. The portion of the total payment attributable to any discretionary reduction of up to 20% in the loan rate would be subject to the current combined \$250,000 limit.

Farm acreage base (FAB) would be created, which would be the sum of the crop acreage bases for all program crops on a farm plus a newly created oilseed base. A producer could grow any combination of these crops as long as the plantings did not exceed the FAB. Deficiency payments would be paid on 1990 crop acreage base for 1991-97, regardless of program crop or oilseed planted. Payments also would be made for planting conserving crops as long as they were not harvested. No payments would be made for nonprogram crops planted on FAB, but producers would maintain base.

Minimum target prices for 1991-97: wheat, \$4.00/bu.; corn, \$2.75/bu.; cotton, 72.9 cents/lb.; rice, \$10.71/cwt. This bill also would establish a graduated oilseed payment: for each cent the average soybean price for the marketing year was below \$5.02/bu. but above \$4.50/bu., a 30 cents/acre payment would be made. If the price fell below \$4.50/bu., a payment equal to the amount the soybean price was below \$4.50 times the average county soybean yield from 1985-89 would be made. Other oilseed payments would be based on soybeans.

Producers also would have the option of a "guaranteed deficiency payment" if they locked in their deficiency payment at sign-up.

Payment limits would be set at \$50,000 for deficiency & diversion payments; \$100,000 for disaster; & \$250,000 for all program payments. A producer could not place the same quantity of a crop under both recourse & non-recourse loans, but could place the crop under a combination of the two loans.

## Special Article

## Miscellaneous Commodity Programs:

## Current &amp; Proposed Legislation

## 1. Current statutes

*Current statutes authorize programs for honey, milk, peanuts, sugar, & wool & mohair through the 1990 marketing year.*

*The features of the authorized programs differ considerably from current programs for the major field crops (e.g. none feature deficiency payments for income support).*

## Honey

Price support is provided to honey producers through annual nonrecourse loans.

Declining honey loan rates were mandated by the Food Security Act of 1985 to help move honey toward market pricing.

The Secretary has discretion to allow repayment of honey loans at rates lower than the announced level if such rates will lower loan forfeitures, keep stocks of honey from becoming excessive, reduce Government costs, & maintain the competitiveness of honey in domestic & export markets. The Secretary has implemented the lowered repayment rates each year since 1986. Gains from repaying honey loans at lowered rates are subject to the \$250,000 aggregate program payment limitation. Also, the value of nonrecourse loan forfeitures is limited to \$250,000.

## Milk

Milk prices are supported through government purchases of storable dairy products: butter, cheese, & nonfat dry milk.

In recent years, the Secretary has been either mandated or authorized to adjust the price support rate on January 1 dependent on the estimated level of CCC purchases for the calendar year. Purchases of 2.5 billion or fewer pounds of dairy products would trigger a 50-cent price support increase, whereas estimated purchases of 5 billion or more pounds would trigger a 50-cent decrease.

Other currently authorized dairy programs include the Dairy Export Incentive Program, which provides payments to assist exporters of dairy products, & the Dairy Indemnity Program, which compensates dairy farmers & dairy product manufacturers for products that must be pulled from the market due to contamination by chemicals or other residues.

## 2. Food &amp; Agricultural Resources Act of 1990 - H.R. 3950 - de la Garza &amp; Madigan

Would continue the current price support program with 5% reductions in the loan rate for each of the 1991 through 1995 crop years; provides that the loan rate cannot decline below 75% of the previous 5-year moving average (excluding the high & low) of prices received by farmers for honey.

Would continue programs introduced by the Food Security Act of 1985 as described above.

## 3. The Food Security Act of 1989 - S. 2292 - Lugar

A target price & loan rate system would replace the current price support structure, but a lower loan repayment program would continue to be required.

Would continue current program with additional discretion given to the Secretary. Cuts or increases in the support price would be determined by estimates of government purchases:

Estimated govt. purch. (bil. lbs.)	Price support adjustment (\$/cwt)
0 to 2.5	+.25 to +.50
2.51 to 5.0	-.25 to +.25
5.01 to 7.5	-.25 to -.50
7.51 to 10.0	-.50 to -.75
10.0 or more	-1.00

## 4. Farm Flexibility Act of 1990 - S. 2251 - Boschwitz

No provisions

No provisions.



## Honey, Milk, Peanuts, Sugar, Wool & Mohair

### Peanuts

The current program provides a two-tiered price support system for "quota" peanuts (primarily sold for domestic use) & "additional" peanuts (primarily sold for export). A national poundage quota limits the amount of peanuts that is eligible for support at the quota support rate, which is approximately four times as high as the additional support rate.

Although support may be provided to producers through purchases or loans on farm-stored peanuts, it is provided mainly through nonrecourse warehouse-storage loans to grower associations acting for farmers.

Quota peanut support rates are adjusted annually to include up to a 6-percent increase in the cost of production.

The bill would continue the program as defined in the Food Security Act of 1985. The Secretary would set the national poundage quota for domestic use at not less than 1.1 million tons, & price support rates could increase up to 6% above the previous year.

The peanut support rate would be set at 90% of the 1985 level. Present restrictions on selling or leasing production quotas would be eliminated.

No provisions.

### Sugar

Sugarcane prices are supported through nonrecourse loans at not less than 18 cents/lb. for raw cane sugar. Sugarbeet prices must be supported at a level that is fair & reasonable in relation to sugarcane.

The Secretary may increase the sugar support level based on factors he considers fair, reasonable, & relevant; however, if he fails to increase the support rate annually, he must submit a report to Congress explaining why he did not do so.

The President must use all available authorities to ensure the sugar program operates at no cost to the government. Import quotas are the primary tool used.

The bill would continue sugar program with nonrecourse loan of at least 18 cents/lb. for raw cane sugar; sugarbeets would be set in relation to this rate. The Secretary would again be required to submit a report to Congress if the support rate were not increased as defined in current law.

No provisions.

No provisions.

### Wool & Mohair

Shorn wool prices are supported through payments based on the percentage needed to bring the average return for all producers up to a statutory formula-based support price. Payments are made on net sales proceeds.

Support prices for pulled wool are established in terms of its value relative to shorn wool, & support prices for mohair are established so they are approximately the same percentage of parity as support prices for shorn wool.

Total wool & mohair program payments as of any date cannot exceed 70% of the aggregate gross receipts, as of the same date, from import duties collected on wool & fine animal hair or articles made from these commodities.

Current programs would be continued.

S. 2292 would replace the existing wool & mohair program with a target price/deficiency payment program. Income support would be provided through direct government payments that would make up any differences between average market prices & a specified "target" price. Deficiency payment rates would not vary due to fiber quality; however, there would be separate rates for wool & mohair. A loan program would not be made available to wool & mohair producers.

No provisions.

## Special Article

## Miscellaneous Program Provisions:

## Current &amp; Proposed Legislation

## 1. Current statutes

## Conservation

Major features include highly erodible land provisions, wetland conservation provisions, & the Conservation Reserve Program.

Highly erodible land provisions include "sodbuster" & conservation compliance requirements to place highly erodible land under approved conservation plans as a condition for receiving program benefits.

The wetland conservation provision denies program benefits to anyone who converts wetlands to cropland.

The Conservation Reserve Program (CRP) pays rent to landowners & farm operators for taking highly erodible land out of production for 10 years.

The CRP was mandated for the 1986 through 1990 crop years, & acreage enrollment minimum & maximum levels were also mandated. Through December 1989, 33.9 million acres were enrolled in the CRP at an average annual rental rate of approximately \$49 per acre.

## Credit

The Secretary may make or guarantee real estate loans, operating loans, & emergency loans to farmers, ranchers, & organizations whose primary business is farming or ranching & which are controlled by farmers & ranchers. The loans are targeted to family-sized farmers who are unable to obtain sufficient credit elsewhere on reasonable terms.

Real estate loans may not exceed the smaller of the value of the farm or other security or, in the case of a guaranteed loan, \$300,000; in the case of a direct loan, \$200,000. Operating loans may not exceed \$400,000 in the case of guaranteed loans or \$200,000 in the case of direct loans. Emergency loans are limited to the actual loss or \$500,000, whichever is smaller. Emergency loans are not made for crop disasters if federally subsidized crop insurance was available but not purchased.

Interest rates for credit program loans are subsidized (e.g., in the case of real estate the interest rate is 1% above the interest received for a government security of similar maturity).

The Secretary has wide discretionary authority to allow deferred payments & otherwise avoid foreclosure in the event borrowers are unable to pay on time.

## 2. Food &amp; Agricultural Resources Act of 1990 - H.R. 3950 - de la Garza &amp; Madigan

H.R. 3950 would provide the Secretary of Agriculture with discretionary authority to formulate & carry out a CRP for the 1991 through 1995 crop years. No mandatory enrollment guidelines are provided, & no changes are proposed for almost all of the current statutes that relate to duties of participants & the government under CRP contracts.

No provisions.

## Conservation, Credit, Disaster Assistance, Export Market Development, Food Programs

### Disaster Assistance/Crop Insurance

Federally subsidized insurance is authorized for most crops that are grown commercially in a particular region; it is currently available for a wide variety of crops, but not always available in each locality where a crop is grown.

If federal crop insurance is not available to wheat, feed grains, upland cotton, or rice producers under the Federal Crop Insurance Act, current statutes mandate disaster assistance payments for prevented plantings & reduced yields.

The Secretary has discretion to make disaster assistance payments to the producers of these crops even if federal crop insurance was available & purchased, provided that: such losses have created an economic emergency for producers, additional economic assistance is needed to alleviate the economic emergency, & federal crop insurance payments & other federal assistance are insufficient to relieve the emergency.

Similar provisions allow the Secretary to assist livestock producers in the event of natural disasters affecting feed supplies.

H.R. 3950 would extend the current prevented planting & reduced yield disaster assistance coverage to include the 1991-95 crops.

This proposal does not specifically address livestock disaster assistance or federal crop insurance; however, since livestock disaster assistance statutes are not scheduled to expire, the proposal would not alter producers' protection under those statutes.

### Export Market Development

The Targeted Export Assistance Program is intended to offset the adverse effects on producers of subsidized exports from competitors; the Export Enhancement Program is intended to expand exports & offset unfair trading practices of other nations by effectively lowering export prices through the release of CCC-owned stocks to U.S. exporters who have verified export sales.

Overseas food assistance programs, which provide sales on soft credit terms & donations of food to developing countries, also aim to expand the longer term commercial demand for U.S. agricultural products. These programs include Food for Peace, Food for Progress, & commodity donations under Section 416(b) of the Agricultural Act of 1949.

This proposal would extend the current export assistance programs through fiscal 1995.

### Domestic Food Assistance

Four types of programs are offered. The largest is the Food Stamp Program, which aids qualified low-income households in making food purchases.

Commodity distribution programs give surplus government-owned food to needy individuals, charitable institutions, American Indians, & the elderly.

Supplemental food programs help narrowly targeted groups that have special nutritional needs. For example, the WIC program helps infants & children by providing their mothers with coupons that can be spent only on certain food items—infant formula, for example.

The School Lunch, School Breakfast, Special Milk, & Summer Food programs assist in providing nutritionally adequate diets to children.

The bill would extend authority to operate the Food Stamp Program, various commodity distribution programs, & supplemental food programs.

Appropriations for each of the programs would be authorized at fiscal 1990 levels. No intra-period increases in appropriations are provided for.

## Special Article

## Miscellaneous Program Provisions:

## Proposals

**3. The Food Security Act of 1990 - S. 2292 - Lugar**

## Conservation

Producers' crop bases would be protected beyond the present expiration dates of CRP contracts as long as the land was maintained in grass or trees. To protect water quality & wildlife habitat, former wetlands which had been converted to crop production could be entered into the CRP & restored to their wetland status.

Under future CRP contracts, land would have to meet strict erodibility standards if returned to crop production. The bill also would provide incentives for increased planting of hardwood trees under the CRP, such as contracts for up to 15 years & expanded cost-share payments. Windbreaks & shelterbelts would be allowed into the CRP.

USDA would be authorized to enter CRP contracts during 1991-95. Special emphasis would be placed on contracts to improve water quality.

## Credit

Eligibility for direct Farmers Home Administration operating loans would be limited to 7 years, & targeted to existing borrowers & beginning farmers.

"Borrower-rights" provisions would be changed to restrict eligibility for debt write-downs to loans made in 1987 & before, requiring that borrowers deal in good faith with FmHA to receive favorable buyouts & other assistance.

**4. Farm Flexibility Act of 1990 - S. 2251 - Boschwitz**

Conservation compliance, sodbuster, & swampbuster provisions would continue through 1997. Crop rotation would be allowed without producers losing deficiency payments.

The CRP would be open to enrollment for up to 45 million acres & eligible land would be expanded to include: wetlands & surrounding uplands, all shelterbelts & windbreaks, & lands that pose on- or off-farm threats. Planting of hardwood trees would be encouraged through eligibility for 15-year contracts, 50% cost-sharing for establishing & maintaining the new trees, & conversion of existing grass contracts to contracts allowing hardwood tree plantings.

No provisions.



## Conservation, Credit, Disaster Assistance, Export Market Development, Food Programs

### Disaster Assistance/Crop Insurance

The bill would eliminate the Federal Crop Insurance Corporation, leaving multiperil insurance to the private sector. A new disaster assistance program would be created, administered through the Agricultural Stabilization & Conservation Service, for all crops now covered by FCIC plus hay & forage.

Disaster payments would be available only in counties where yields fell below 65% of normal. Upon county eligibility, producers would receive payments if their own yields were below 60% of the county average yield. Payments would be 65% of the 3-year average price, or 33% of the average price if producers were prevented from planting a crop.

Similar provisions would allow the Secretary to assist livestock producers in the event of natural disasters affecting feed supplies.

### Export Market Development

The Export Enhancement Program would continue without specific budgetary limits. The Targeted Export Assistance Program would continue at \$200 million or less, the current authorized level. Export Credit Guarantees (GSM-102 & GSM-103) would be authorized at \$5 billion for short-term credits & \$1 billion for intermediate-term credits.

### Domestic Food Assistance

The Food Stamp Program would be reauthorized, with provisions aimed at preventing fraud & abuse by food stores, & setting aside special grants to reach the homeless. Bill would require participants' cooperation with local child-support agencies. It also would reauthorize the Commodity Supplemental Food Program, the Food Distribution Program on Indian Reservations, & other special donation programs.

No provisions.

Would extend Food Security Wheat Reserve.

No provisions.

# Statistical Indicators

## Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1989				1990				
	II	III	IV	Annual	I	II F	III F	IV F	Annual F
Prices received by farmers (1977=100)	148	145	147	148	152	142	139	136	142
Livestock & products	156	159	166	160	171	158	156	153	159
Crops	141	130	128	135	132	126	122	117	125
Prices paid by farmers, (1977=100)									
Production items	166	166	165	165	168	—	—	—	166
Commodities & services, interest, taxes, & wages	177	178	178	177	181	—	—	—	180
Cash receipts (\$ bil.) 1/	160	164	151	158	170	169	168	146	160-166
Livestock (\$ bil.)	81	82	86	83	93	82	80	80	83-85
Crops (\$ bil.)	79	82	65	74	78	87	87	66	78-82
Market basket (1982-84=100)									
Retail cost	124	125	127	125	133	—	—	—	—
Farm value	108	107	108	107	118	—	—	—	—
Spread	133	135	137	134	141	—	—	—	—
Farm value/retail cost (%)	30	30	30	30	31	—	—	—	—
Retail prices (1982-84=100)									
Food	125	126	127	125	131	131	—	—	—
At home	124	125	126	124	132	131	—	—	—
Away from home	127	128	130	127	131	132	—	—	—
Agricultural exports (\$ bil.) 2/	9.8	8.8	10.6	39.7	10.3	8.8	8.8	—	38.5
Agricultural imports (\$ bil.) 2/	5.5	5.0	5.4	21.5	5.9	5.4	4.8	—	21.5
Commercial production									
Red meat (mil. lb.)	9,871	9,848	10,105	39,418	9,581	9,662	9,790	10,148	39,181
Poultry (mil. lb.)	5,538	5,704	5,727	22,039	5,811	5,940	6,040	6,015	23,606
Eggs (mil. doz.)	1,394	1,389	1,415	5,587	1,390	1,410	1,410	1,450	5,660
Milk (bil. lb.)	37.7	35.2	34.9	144.3	38.9	38.6	36.3	35.8	147.4
Consumption, per capita									
Red meat and poultry (lb.)	54.6	55.4	57.6	220.5	53.4	54.9	55.4	58.1	221.8
Corn beginning stocks (mil. bu.) 3/	5,203.9	3,419.0	1,830.0	4,259.1	7,079.2	4,813.0	—	—	1,930.4
Corn use (mil. bu.) 3/	1,785.8	1,489.3	2,378.1	7,260.2	2,297.0	—	—	—	—
Prices 4/									
Choice steers—Omaha (\$/cwt)	73.85	70.09	72.46	72.52	77.20	74-78	69-75	71-77	72-79
Barrows & gilts—7 mths. (\$/cwt)	41.84	46.07	47.42	44.03	49.45	57-61	56-62	48-54	52-58
Broilers—12-city (cts./lb.)	67.1	59.7	49.8	59.0	56.5	55-59	55-61	48-52	52-58
Eggs—NY gr. A large (cts./doz.)	75.2	81.5	92.8	81.9	87.8	71-75	63-69	63-69	70-76
Milk—all at plant (\$/cwt)	12.27	13.27	15.47	13.56	14.60	11.50-13.25	11.25-13.00	11.75-13.50	12.30-13.60
Wheat—KC HRW ordinary (\$/bu.)	4.44	4.31	4.34	4.35	4.16	—	—	—	—
Corn—Chicago (\$/bu.)	2.78	2.49	2.36	2.55	2.42	—	—	—	—
Soybeans—Chicago (\$/bu.)	7.39	6.71	5.70	6.70	5.70	—	—	—	—
Cotton—Avg. spot mkt. (cts./lb.)	63.1	68.6	67.1	63.74	65.07	—	—	—	—
	1983	1984	1985	1986	1987	1988	1989	1990 F	1991 F
Gross cash income (\$ bil.)	150.4	155.3	156.9	152.5	162.0	171.8	174	176-182	—
Gross cash expenses (\$ bil.)	113.5	116.6	110.2	100.7	107.5	114.4	121	121-123	—
Net cash income (\$ bil.)	36.9	38.7	46.7	51.8	54.5	57.2	53	54-58	—
Net farm income (\$ bil.)	12.7	32.2	32.4	38.0	43.6	42.7	49	45-49	—
Farm real estate values 5/									
Nominal (\$ per acre)	788	801	713	640	599	632	667	693	714-721
Real (1977 \$)	472	459	395	346	317	322	325	322	317-320

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3/ Dec-Feb. first quarter; Mar.-May second quarter; June-Aug. third quarter; Sept.-Nov. fourth quarter; Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages. 5/ 1990 values as of January 1. 1986-89 values as of February 1. 1982-85 values as of April 1. F = forecast, — = not available.

## U.S. and Foreign Economic Data

Table 2.—U.S. Gross National Product &amp; Related Data

	Annual			1989				1990
	1987	1988	1989	I	II	III	IV	I P
\$ billion (quarterly data seasonally adjusted at annual rates)								
Gross national product	4,524.3	4,880.6	5,234.0	5,113.1	5,201.7	5,281.0	5,340.2	5,441.2
Personal consumption expenditures	3,010.8	3,235.1	3,471.1	3,381.4	3,444.1	3,508.1	3,550.6	3,639.2
Durable goods	421.0	455.2	473.2	468.4	471.0	488.1	489.5	492.9
Nondurable goods	998.1	1,052.3	1,123.4	1,098.3	1,121.5	1,131.4	1,142.4	1,188.9
Clothing & shoes	177.2	186.8	200.1	195.0	198.9	202.2	204.3	208.2
Food & beverages	529.2	559.7	594.9	587.3	592.2	598.1	601.8	615.6
Services	1,591.7	1,727.6	1,874.4	1,816.7	1,851.7	1,890.8	1,938.7	1,979.5
Gross private domestic investment	899.9	750.3	773.4	789.6	775.0	779.1	770.1	781.4
Fixed investment	870.6	719.6	746.3	742.0	747.6	751.7	744.0	764.9
Change in business inventories	29.3	30.8	27.1	27.7	27.4	27.4	28.1	-3.5
Net exports of goods & services	-112.8	-73.7	-47.1	-54.0	-50.6	-45.1	-38.8	-40.1
Government purchases of goods & services	926.1	968.9	1,036.6	1,018.0	1,033.2	1,038.9	1,058.3	1,080.6
1982 \$ billion (quarterly data seasonally adjusted at annual rates)								
Gross national product	3,853.7	4,024.4	4,144.1	4,106.8	4,132.5	4,162.9	4,174.1	4,195.8
Personal consumption expenditures	2,513.7	2,598.4	2,669.6	2,641.0	2,653.7	2,669.1	2,693.7	2,710.1
Durable goods	389.6	413.6	425.2	419.3	424.9	436.4	420.3	437.1
Nondurable goods	890.4	904.5	916.7	915.0	909.7	920.8	921.1	912.2
Clothing & shoes	159.6	161.3	168.9	165.0	165.8	173.3	171.6	170.8
Food & beverages	452.7	460.0	462.8	466.0	461.4	463.2	460.5	457.5
Services	1,233.7	1,280.2	1,327.7	1,306.7	1,319.0	1,332.9	1,352.2	1,360.7
Gross private domestic investment	874.0	715.8	720.7	721.1	719.8	724.6	717.3	710.9
Fixed investment	850.3	687.9	698.8	696.6	700.7	702.7	695.1	708.3
Change in business inventories	23.7	27.9	21.9	24.5	19.1	21.9	22.2	2.6
Net exports of goods & services	-115.7	-74.9	-52.6	-55.0	-51.2	-57.1	-47.2	-41.2
Government purchases of goods & services	781.8	785.1	806.4	799.7	810.3	805.3	810.4	816.1
GNP implicit price deflator (% change)	3.2	3.3	4.1	4.0	4.6	3.2	3.2	5.7
Disposable personal income (\$ bil.)	3,205.9	3,477.8	3,778.8	3,689.5	3,747.7	3,806.8	3,871.3	3,961.2
Disposable per. income (1982 \$ bil.)	2,676.6	2,793.2	2,906.3	2,881.7	2,887.6	2,919.2	2,936.9	2,949.6
Per capita disposable per. income (\$)	13,140	14,116	15,186	14,884	15,084	15,280	15,495	15,819
Per capita dis. per. income (1982 \$)	10,970	11,337	11,880	11,625	11,622	11,717	11,755	11,780
U.S. population, total, incl. military abroad (mil.)	243.9	246.4	248.8	247.9	248.4	249.1	249.8	250.4
Civilian population (mil.)	241.7	244.1	246.6	245.7	246.2	246.9	247.6	248.2
	Annual			1989		1990		
	1987	1988	1989	Mar	Dec	Jan	Feb	Mar P
Monthly data seasonally adjusted								
Industrial production (1987=100)	100.0	105.4	108.1	107.7	108.6	107.2	108.1	108.8
Leading economic indicators (1982=100)	140.1	142.8	144.9	144.7	145.1	145.3	143.9	145.2
Civilian employment (mil. persons)	112.4	115.0	117.3	117.0	117.9	117.9	118.0	118.3
Civilian unemployment rate (%)	6.1	5.4	5.2	5.0	5.3	5.2	5.2	5.1
Personal income (\$ bil. annual rate)	3,777.8	4,064.5	4,427.3	4,360.7	4,564.1	4,599.6	4,634.3	4,670.1
Money stock—M2 (daily avg.) (\$ bil.) 1/	2,913.2	3,072.4	3,220.0	3,086.9	3,220.0	3,229.1	3,253.9	3,267.8
Three-month Treasury bill rate (%)	5.82	8.69	8.12	8.83	7.64	7.64	7.76	7.87
AAA corporate bond yield (Moody's) (%)	9.38	9.71	9.26	9.80	8.86	8.99	9.22	9.37
Housing starts (1,000) 2/	1,621	1,488	1,378	1,405	1,273	1,568	1,457	1,321
Auto sales at retail, total (mil.)	10.3	10.6	9.9	9.7	8.9	10.2	9.5	9.5
Business inventory/sales ratio	1.51	1.49	1.50	1.50	1.51	1.51	1.48	—
Sales of all retail stores (\$ bil.)	128.5	137.5	144.5	141.4	145.6	149.9	149.5	148.6
Nondurable goods stores (\$ bil.)	80.5	85.2	90.7	88.7	93.1	93.7	94.7	94.3
Food stores (\$ bil.)	25.8	27.2	29.1	28.6	29.9	29.9	30.1	30.2
Eating & drinking places (\$ bil.)	12.8	13.8	14.5	14.4	14.5	14.8	15.3	15.1
Apparel & accessory stores (\$ bil.)	8.6	7.1	7.8	7.2	7.4	7.7	7.8	7.7

1/ Annual data as of December of the year listed. 2/ Private, including farm. P = preliminary. — = not available.

Information contact: Ann Duncan (202) 786-3313.

Table 3.—Foreign Economic Growth, Inflation, &amp; Export Earnings

	1981	1982	1983	1984	1985	1986	1987	1988	1989 P	1990 F	1991 F	Average 1980-89
	Annual percent change											
World, less U.S.												
Real GDP	1.5	0.6	2.0	4.5	3.6	3.0	3.6	3.8	2.9	2.4	2.9	2.8
Consumer prices	15.0	13.7	14.3	11.8	11.3	8.0	10.0	15.0	20.2	18.0	8.4	13.5
Merch. exports	-2.7	-6.7	-2.7	5.1	2.4	11.0	18.4	13.1	8.3	10.4	9.9	6.6
Developed less U.S.												
Real GDP	1.2	0.2	2.2	4.6	3.5	2.7	3.4	3.9	3.6	2.7	3.2	2.7
Consumer prices	10.0	7.8	5.6	4.7	4.2	2.5	2.8	3.3	4.4	4.0	3.8	5.7
Merch. exports	-3.2	-4.4	-0.5	6.9	4.6	19.4	17.7	12.4	5.5	11.6	10.2	7.5
Developing												
Real GDP	2.0	1.8	1.5	4.0	3.8	3.7	4.5	5.7	3.5	3.7	4.7	3.5
Consumer prices	28.4	30.0	39.5	35.1	35.3	26.6	35.3	59.5	86.3	51.4	19.4	40.4
Merch. exports	-1.8	-10.4	-6.5	2.9	-1.7	-5.7	20.2	14.7	12.3	6.4	10.6	4.9
Asia, incl. China												
Real GDP	6.1	5.5	7.7	7.3	7.0	6.1	7.0	9.2	6.3	6.0	6.2	6.8
Consumer prices	9.3	5.8	6.2	6.7	7.2	5.6	7.4	11.8	10.2	8.2	10.4	8.3
Merch. exports	7.6	-0.5	4.6	14.6	-0.9	9.4	29.4	23.1	10.3	6.9	12.6	12.5
Latin America												
Real GDP	-0.4	-1.5	-2.6	3.3	3.4	3.6	3.1	1.0	1.1	1.4	2.9	1.7
Consumer prices	60.1	73.6	118.9	116.5	127.7	82.3	116.1	218.0	350.0	304.3	81.2	131.8
Merch. exports	6.5	-10.6	-1.0	6.7	-7.6	-14.6	6.0	18.9	10.3	8.8	7.5	4.6
Africa												
Real GDP	-1.9	0.6	0.0	-0.3	3.9	1.0	1.3	2.2	2.4	2.6	2.3	1.6
Consumer prices	23.4	14.1	19.7	19.1	11.9	12.2	12.6	18.9	22.3	14.6	13.1	16.8
Merch. exports	-19.7	-9.1	-8.0	3.4	0.0	-21.3	17.6	-8.1	15.3	4.8	7.6	0.5
Middle East												
Real GDP	2.7	3.7	0.5	1.0	-1.8	2.0	1.5	1.4	6.0	4.4	4.7	1.7
Consumer prices	16.8	14.0	14.5	19.6	13.8	11.8	12.9	19.6	21.4	18.0	17.8	16.2
Merch. exports	-3.8	-21.1	-22.2	-10.5	-6.8	-19.2	16.6	0.1	29.4	6.6	8.5	-1.5
Eastern Europe, incl. USSR												
Real GDP	—	—	—	2.3	1.5	2.5	1.0	1.8	0.3	-0.4	0.1	1.6
Consumer prices	—	—	—	—	13.3	15.9	21.6	37.9	323.8	129.7	26.5	82.5
Merch. exports	—	—	—	—	-8.1	-3.2	12.8	7.9	2.2	6.5	4.6	2.3

P = preliminary. F = forecast. — = not available.

Information contact: Alberto Jorjardo, (202) 786-1705.

## Farm Prices

Table 4.—Indexes of Prices Received &amp; Paid by Farmers, U.S. Average

	Annual			1989			1990			
	1987	1988	1989	Apr	Nov	Dec	Jan	Feb	Mar R	Apr P
	1977=100									
Prices received										
All farm products	127	138	148	148	147	149	154	152	150	151
All crops	106	128	135	142	128	127	136	133	128	132
Food grains	103	138	156	161	150	153	151	145	143	143
Feed grains & hay	65	120	128	138	118	119	120	120	123	129
Feed grains	81	117	123	131	113	114	115	115	117	123
Cotton	99	95	98	97	108	102	99	100	106	107
Tobacco	129	133	144	144	144	144	144	144	144	144
Oil-bearing crops	79	108	102	111	89	90	91	90	91	91
Fruit, all	182	184	190	180	208	182	166	172	179	199
Fresh market 1/	196	196	200	189	219	188	169	171	185	210
Commercial vegetables	146	144	156	175	139	149	253	225	145	126
Fresh market	147	137	146	164	128	134	242	210	132	116
Potatoes & dry beans	126	124	187	212	166	178	184	192	210	240
Livestock & products	148	150	160	154	165	170	172	169	171	169
Meat animals	163	168	174	170	175	180	185	188	190	193
Dairy products	129	126	139	127	160	166	162	148	141	135
Poultry & eggs	107	116	138	139	134	136	139	131	145	132
Prices paid										
Commodities & services										
Interest, taxes, & wage rates	162	169	177	177	—	—	181	—	—	183
Production items	147	157	165	166	—	—	168	—	—	166
Feed	103	128	135	140	—	—	128	—	—	128
Feeder livestock	179	192	194	185	—	—	205	—	—	213
Seed	148	150	165	170	—	—	170	—	—	163
Fertilizer	118	130	137	141	—	—	129	—	—	130
Agricultural chemicals	124	126	132	133	—	—	133	—	—	141
Fuels & energy	161	163	180	184	—	—	200	—	—	187
Farm & motor supplies	145	148	155	155	—	—	156	—	—	156
Autos & trucks	208	215	223	226	—	—	225	—	—	234
Tractors & self-propelled machinery	174	181	193	192	—	—	199	—	—	201
Other machinery	185	197	208	208	—	—	210	—	—	217
Building & fencing	137	138	141	140	—	—	143	—	—	144
Farm services & cash rent	146	147	158	158	—	—	183	—	—	183
Int. payable per acre on farm real estate debt	189	182	177	177	—	—	178	—	—	178
Taxes payable per acre on farm real estate	144	146	152	152	—	—	150	—	—	156
Wage rates (seasonally adjusted)	166	171	185	186	—	—	193	—	—	193
Production items, interest, taxes, & wage rates	151	160	167	167	—	—	170	—	—	171
Ratio, prices received to prices paid (%) 2/	79	82	84	84	83	84	86	84	83	83
Prices received (1910-14=100)	578	632	674	678	672	681	705	693	686	689
Prices paid, etc. (parity index) (1910-14=100)	1,111	1,165	1,220	1,220	—	—	1,248	—	—	1,259
Parity ratio (1910-14=100) (%) 2/	52	54	55	55	55	56	55	—	—	55

1/ Fresh market for noncitrus; fresh market &amp; processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities &amp; services, interest, taxes, &amp; wage rates. Ratio uses the most recent prices paid index. Prices paid data are quarterly &amp; will be published in January, April, July, &amp; October. R = revised. P = preliminary. — = not available.

Information contact: Ann Duncan (202) 786-3313.



Table 5.—Prices Received by Farmers, U.S. Average

	Annual 1/			1989			1990			
	1987	1988	1989 P	Apr	Nov	Dec	Jan	Feb	Mar R	Apr P
<b>CROPS</b>										
All wheat (\$/bu.)	2.57	3.72	3.71	4.03	3.71	3.80	3.71	3.58	3.49	3.51
Rice, rough (\$/cwt)	7.27	6.83	7.25-7.50	6.74	6.94	6.95	7.40	7.52	7.50	7.26
Corn (\$/bu.)	1.94	2.54	2.30-2.40	2.56	2.24	2.27	2.31	2.32	2.37	2.52
Sorghum (\$/cwt)	3.04	4.05	3.68-3.84	4.21	3.88	3.54	3.58	3.54	3.70	3.92
All hay, baled (\$/ton)	64.76	86.74	89.86	101.00	83.80	83.10	85.00	85.80	88.50	91.80
Soybeans (\$/bu.)	5.88	7.42	5.65	7.29	5.68	5.64	5.85	5.57	5.85	5.62
Cotton, upland (cts./lb.)	64.3	58.6	5/ 65.6	58.7	65.8	61.4	59.8	60.6	64.1	64.8
Potatoes (\$/cwt)	4.38	6.02	6.85	8.33	6.55	7.02	7.15	7.40	8.30	9.80
Lettuce (\$/cwt)	14.70	14.70	13.80	8.51	13.30	7.08	10.30	7.15	7.88	8.35
Tomatoes fresh (\$/cwt)	28.00	28.90	31.80	55.80	28.20	40.30	118.00	97.80	32.80	16.00
Onions (\$/cwt)	12.50	9.72	10.70	10.90	11.30	12.40	11.80	15.70	19.60	23.00
Dry edible beans (\$/cwt)	18.50	29.80	27.90	33.50	27.70	27.80	30.00	32.70	32.10	32.50
Apples for fresh use (cts./lb.)	12.7	17.4	—	14.4	13.4	12.2	12.5	13.0	12.9	13.3
Pears for fresh use (\$/ton)	227.00	358.00	360.00	350.00	369.0	351.00	349.00	389.0	420.00	415.00
Oranges, all uses (\$/box) 2/	5.40	7.18	6.89	7.01	6.47	5.63	4.70	4.93	5.33	6.60
Grapefruit, all uses (\$/box) 2/	4.96	5.43	4.48	4.41	5.54	5.18	4.62	4.68	6.23	8.19
<b>LIVESTOCK</b>										
Beef cattle (\$/cwt)	61.40	66.80	69.68	70.10	69.80	71.00	73.70	74.80	74.20	75.00
Calves (\$/cwt)	78.10	89.90	91.90	90.40	88.70	89.10	91.00	98.00	99.10	102.00
Hogs (\$/cwt)	50.80	42.50	43.24	36.90	45.00	48.20	47.30	48.20	51.30	52.90
Lambs (\$/cwt)	77.90	69.50	67.30	75.20	58.70	59.00	58.40	59.80	66.00	61.80
All milk, sold to plants (\$/cwt)	12.54	12.28	13.58	12.40	15.50	16.10	15.70	14.40	13.70	13.10
Milk, manuf. grade (\$/cwt)	11.37	11.15	12.38	11.20	14.80	15.10	14.20	12.50	12.20	12.30
Broilers (cts./lb.)	28.3	34.0	36.4	39.1	29.8	28.6	30.7	33.5	36.4	33.2
Eggs (cts./doz.) 3/	53.1	53.2	69.6	66.1	78.6	82.8	83.8	70.4	79.3	71.4
Turkeys (cts./lb.) 4/	34.3	38.9	40.2	42.0	40.9	39.6	35.9	33.7	37.2	37.0
Wool (cts./lb.) 4/	91.7	138.0	122.0	135.0	102.0	94.0	65.8	70.6	83.4	92.6

1/ Season average price by crop year for crops. Calendar year average of monthly prices for livestock. 2/ Equivalent on-tree returns. 3/ Average of all eggs sold by producers including hatching eggs & eggs sold at retail. 4/ Average local market price, excluding incentive payments. 5/ Weighted average of first 8 months of the season - not a projection for 1989/90. P = preliminary. R = revised. — = not available.

Information contact: Ann Duncan (202) 786-3313.

## Producer & Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual	1989						1990		
	1989	Mar	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
		1982-84=100								
Consumer Price Index, all items	124.0	122.3	124.6	125.0	125.6	125.9	126.1	127.4	128.0	128.7
Consumer Price Index, less food	123.7	122.0	124.3	124.8	125.4	125.6	125.8	126.7	127.3	128.1
<b>All food</b>	<b>125.1</b>	<b>123.5</b>	<b>125.8</b>	<b>126.1</b>	<b>126.5</b>	<b>126.9</b>	<b>127.4</b>	<b>130.4</b>	<b>131.3</b>	<b>131.5</b>
Food away from home	127.4	125.7	128.1	128.8	129.1	129.5	129.0	130.3	131.0	131.8
Food at home	124.2	122.7	124.9	125.0	125.4	125.8	126.5	131.0	132.1	131.9
Meats 1/	116.7	115.5	117.5	117.7	118.1	119.3	120.0	122.3	123.5	124.0
Beef & veal	119.3	119.0	119.7	120.0	120.0	121.3	122.1	124.5	126.2	126.6
Pork	113.2	111.0	114.8	114.3	114.9	116.8	117.2	119.7	119.7	121.0
Poultry	132.7	130.3	136.2	134.0	131.2	126.8	127.8	128.6	130.5	134.8
Fish	143.6	144.3	145.2	146.9	143.9	142.0	143.0	149.0	150.6	148.0
Eggs	118.5	122.9	115.2	124.6	122.9	129.4	134.9	143.9	124.7	131.6
Dairy products 2/	115.6	113.8	114.5	116.1	118.2	120.2	122.9	125.8	126.9	126.8
Fats & oils 3/	121.2	120.4	121.7	121.3	121.6	121.0	121.6	123.5	123.4	124.2
Fresh fruit	152.4	149.5	151.4	155.1	156.6	152.7	154.8	171.4	170.3	171.1
Processed fruit	125.9	124.7	128.9	127.8	127.1	126.6	125.2	125.1	131.9	136.7
Fresh vegetables	143.1	140.2	145.1	133.9	134.8	141.9	136.5	176.9	188.3	168.3
Potatoes	153.5	148.6	182.3	153.1	139.8	135.0	140.0	150.1	180.1	170.6
Processed vegetables	124.2	122.7	125.9	125.0	124.6	123.8	124.8	125.4	126.3	126.6
Cereals & bakery products	132.4	129.7	134.1	134.6	135.0	135.3	136.1	138.9	137.4	137.6
Sugar & sweets	119.4	118.0	120.8	120.8	121.3	120.7	121.1	122.5	122.9	123.0
<b>Beverages, nonalcoholic</b>	<b>111.3</b>	<b>111.3</b>	<b>111.2</b>	<b>111.0</b>	<b>111.8</b>	<b>111.2</b>	<b>111.0</b>	<b>112.4</b>	<b>113.3</b>	<b>113.1</b>
<b>Apparel</b>										
Apparel, commodities less footwear	117.1	118.1	112.8	118.9	121.8	121.1	117.6	114.6	119.0	124.9
Footwear	114.4	114.1	112.6	114.1	117.6	116.6	114.7	113.1	114.5	116.9
Tobacco & smoking products	164.4	159.2	168.8	168.2	168.8	168.6	171.9	174.1	175.0	175.1
<b>Beverages, alcoholic</b>	<b>123.5</b>	<b>121.8</b>	<b>124.5</b>	<b>124.8</b>	<b>125.2</b>	<b>125.5</b>	<b>125.6</b>	<b>126.2</b>	<b>126.9</b>	<b>127.8</b>

1/ Beef, veal, lamb, pork, & processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ann Duncan (202) 786-3313.

Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual			1989				1990		
	1987	1988	1989 P	Mar	Oct	Nov R	Dec	Jan	Feb	Mar
	1982 = 100									
Finished goods 1/	105.4	108.0	113.5	112.1	114.9	114.9	115.3	117.5	117.4	117.0
Consumer foods	109.5	112.6	118.7	118.3	119.5	120.1	120.9	123.6	124.4	124.1
Fresh fruit	112.0	113.5	111.9	113.5	121.1	113.0	107.4	103.1	112.0	112.6
Fresh & dried vegetables	103.7	105.5	116.9	123.8	110.0	95.8	104.9	158.6	188.7	148.9
Dried fruit	95.0	99.1	103.0	101.9	103.7	106.3	108.2	106.9	106.9	106.9
Canned fruit & juice	115.3	120.2	122.6	121.8	122.9	123.4	123.4	123.9	126.6	127.5
Frozen fruit & juice	113.3	129.8	124.6	121.1	124.0	118.7	119.9	128.6	147.0	147.8
Fresh veg. excl. potatoes	99.0	100.4	104.2	111.0	101.0	80.0	88.0	159.9	199.2	136.6
Canned veg. & juices	103.5	108.3	118.6	119.8	117.7	117.8	118.5	118.5	117.9	118.0
Frozen vegetables	107.3	108.6	115.5	114.8	115.5	116.6	117.0	117.9	117.8	118.4
Potatoes	120.1	113.9	153.6	162.0	140.2	146.7	160.2	162.0	161.2	196.3
Eggs	87.6	88.6	119.6	135.8	124.3	134.6	141.3	154.8	114.0	128.9
Bakery products	118.4	126.4	135.4	133.1	137.3	137.4	137.6	138.7	139.9	140.2
Meats	100.4	99.9	104.8	104.0	104.8	107.2	108.4	110.6	111.1	111.5
Beef & veal	95.5	101.4	109.0	111.3	105.0	108.7	111.0	113.1	113.7	113.7
Pork	104.9	95.0	97.5	92.4	102.3	104.6	104.6	107.2	107.8	108.8
Processed poultry	103.4	111.6	120.8	123.2	112.7	110.3	110.2	107.9	111.2	117.8
Fish	140.0	148.7	144.6	153.2	140.5	140.1	143.2	156.2	156.4	160.6
Dairy products	101.6	102.2	110.6	106.0	116.4	120.1	121.4	120.9	117.1	115.0
Processed fruits & vegetables	108.6	113.8	120.0	119.2	120.0	119.1	120.8	122.5	125.7	126.6
Shortening & cooking oil	103.9	118.8	116.6	117.9	114.8	117.5	115.8	116.6	116.9	120.9
Consumer finished goods less foods	100.7	103.1	108.9	106.8	110.3	109.9	110.4	113.2	112.4	111.7
Beverages, alcoholic	110.3	111.8	115.2	115.1	114.5	114.8	114.5	115.0	116.4	117.7
Soft drinks	111.8	114.3	117.2	117.3	119.0	120.0	118.0	119.6	121.3	123.2
Apparel	108.3	111.7	114.5	113.7	115.2	115.5	115.5	116.5	117.2	117.0
Footwear	109.3	115.1	120.8	119.8	122.5	122.5	123.3	123.7	124.7	124.6
Tobacco products	154.6	171.9	194.9	187.3	200.4	200.4	209.2	209.6	214.1	212.5
Intermediate materials 2/	101.5	107.1	112.0	111.5	112.3	112.0	112.0	113.4	112.5	112.4
Materials for food manufacturing	100.8	106.0	112.7	111.4	113.1	115.4	115.4	115.5	114.9	115.8
Flour	92.9	105.7	114.6	116.6	112.6	112.9	113.8	113.2	112.9	110.6
Refined sugar 3/	106.4	108.9	116.3	116.0	119.2	120.1	121.5	122.3	121.9	122.5
Crude vegetable oils	84.2	116.6	103.4	109.8	94.1	102.6	97.6	100.2	102.6	113.7
Crude materials 4/	93.7	96.0	103.0	103.2	102.1	102.6	104.0	106.7	106.9	105.8
Foodstuffs & feedstuffs	96.2	106.1	111.1	113.7	107.9	109.9	112.3	113.6	114.4	115.2
Fruits & vegetables 5/	106.8	108.5	114.1	118.7	114.3	102.9	105.5	133.5	154.2	132.3
Grains	71.1	97.9	106.4	115.1	98.2	101.1	101.0	100.8	100.4	100.2
Livestock	102.0	103.3	106.0	106.8	104.8	105.6	110.0	110.2	112.7	116.6
Poultry, live	101.2	121.5	128.8	138.5	109.0	111.8	104.3	108.9	115.5	129.1
Fibers, plant & animal	106.4	98.4	107.8	98.4	116.9	115.3	106.3	104.8	108.7	114.7
Fluid milk	91.8	89.4	98.1	91.3	107.6	113.1	115.6	117.0	108.8	100.6
Oilseeds	99.2	134.0	123.8	140.0	101.7	106.1	106.7	106.1	104.6	107.2
Tobacco, leaf	95.7	87.2	93.9	93.1	95.0	93.7	93.7	93.7	93.7	93.7
Sugar, raw cane	110.2	111.9	115.5	112.3	118.0	118.0	117.2	119.3	117.9	119.0
All commodities	102.8	106.9	112.2	111.5	112.8	112.7	113.0	114.9	114.4	114.2
Industrial commodities	102.5	106.3	111.6	110.5	112.4	112.1	112.3	114.2	113.6	113.2
All foods 6/	107.8	111.5	117.8	117.4	118.3	119.1	120.0	122.7	123.3	122.9
Farm products & processed foods & feeds	103.7	110.0	115.3	116.1	114.5	115.5	116.5	118.2	118.5	118.7
Farm products	95.5	104.9	110.7	113.8	107.8	109.0	111.1	114.5	115.7	115.0
Processed foods & feeds 6/	107.9	112.7	117.8	117.5	117.9	118.9	119.3	120.2	120.0	120.8
Cereal & bakery products	112.6	123.0	131.1	129.2	132.4	132.4	132.9	133.0	133.7	133.9
Sugar & confectionery	112.6	114.7	120.1	118.6	120.1	120.5	120.9	120.9	121.2	122.0
Beverages	112.5	114.3	118.3	118.7	118.1	118.4	117.7	118.6	119.7	120.8

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types & sizes of refined sugar. 4/ Products entering market for the first time that have not been manufactured at that point. 5/ Fresh & dried. 6/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). P = preliminary. R = revised.

Information contact: Ann Duncan (202) 786-3313.

## Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

	Annual			1989				1990		
	1987	1988	1989 P	Mar	Oct	Nov	Dec	Jan	Feb	Mar
<b>Market basket 1/</b>										
Retail cost (1982-84=100)	111.6	116.5	124.6	122.9	125.9	126.6	127.4	132.2	133.1	132.9
Farm value (1982-84=100)	97.1	100.5	107.3	107.4	105.6	108.8	110.5	118.0	117.9	118.2
Farm-retail spread (1982-84=100)	119.4	125.1	134.0	131.3	136.9	136.1	136.5	139.8	141.3	140.9
Farm value-retail cost (%)	30.5	30.2	30.1	30.6	29.4	30.1	30.4	31.3	31.0	31.1
<b>Meat products</b>										
Retail cost (1982-84=100)	109.6	112.2	116.7	115.5	118.1	119.3	120.0	122.3	123.5	124.0
Farm value (1982-84=100)	101.2	99.5	103.3	103.7	100.9	104.0	106.9	111.2	111.6	113.7
Farm-retail spread (1982-84=100)	118.3	125.2	130.4	127.6	135.8	135.0	133.4	133.7	135.7	134.5
Farm value-retail cost (%)	46.7	44.9	44.8	45.5	43.2	44.1	45.1	46.1	45.8	46.4
<b>Dairy products</b>										
Retail cost (1982-84=100)	105.9	108.4	115.6	113.8	118.2	120.2	122.9	125.8	126.9	126.8
Farm value (1982-84=100)	93.3	90.6	99.1	94.3	104.8	110.0	113.6	115.2	108.5	102.8
Farm-retail spread (1982-84=100)	117.5	124.7	130.9	131.7	130.5	129.6	131.4	135.8	143.9	149.0
Farm value-retail cost (%)	42.3	40.1	41.1	39.8	42.6	43.9	44.4	43.9	41.0	38.9
<b>Poultry</b>										
Retail cost (1982-84=100)	112.6	120.7	132.7	130.3	131.2	126.8	127.8	128.6	130.5	134.8
Farm value (1982-84=100)	93.8	110.2	118.2	124.3	101.6	100.6	98.7	100.6	107.1	116.7
Farm-retail spread (1982-84=100)	134.2	132.8	149.3	137.3	185.3	157.0	163.6	160.9	157.4	155.7
Farm value-retail cost (%)	44.6	48.9	47.7	51.0	41.4	42.4	40.5	41.9	43.9	46.3
<b>Eggs</b>										
Retail cost (1982-84=100)	91.5	93.6	118.5	122.9	122.9	129.4	134.9	143.9	124.7	131.6
Farm value (1982-84=100)	76.8	76.7	107.7	128.0	110.3	125.1	133.4	135.4	108.4	125.6
Farm-retail spread (1982-84=100)	117.9	123.9	137.7	113.7	145.5	137.1	137.6	159.1	153.9	142.3
Farm value-retail cost (%)	53.9	52.7	58.4	66.9	57.7	62.1	63.5	60.5	55.9	61.3
<b>Cereal &amp; bakery products</b>										
Retail cost (1982-84=100)	114.8	122.1	132.4	129.7	135.0	135.3	136.1	136.9	137.4	137.6
Farm value (1982-84=100)	71.0	92.7	101.7	103.4	98.7	99.4	101.2	101.1	99.5	99.1
Farm-retail spread (1982-84=100)	120.9	126.2	136.7	133.4	140.1	140.3	141.0	141.9	142.7	143.0
Farm value-retail cost (%)	7.6	9.3	9.4	8.8	9.0	9.0	9.1	9.0	8.9	8.8
<b>Fresh fruits</b>										
Retail cost (1982-84=100)	135.6	145.4	154.7	151.6	159.8	155.3	158.6	177.3	172.5	172.8
Farm value (1982-84=100)	113.9	116.5	108.9	97.2	131.6	135.6	109.2	124.5	131.9	136.0
Farm-retail spread (1982-84=100)	145.7	158.7	175.8	178.7	172.8	164.4	181.4	201.7	191.3	189.8
Farm value-retail cost (%)	26.5	25.3	22.2	20.2	26.0	27.6	21.7	22.2	24.1	24.9
<b>Fresh vegetables</b>										
Retail cost (1982-84=100)	121.6	129.3	143.1	140.2	134.8	141.9	136.5	176.9	186.3	188.3
Farm value (1982-84=100)	112.0	105.8	124.0	120.3	102.7	102.0	118.0	197.4	207.6	180.0
Farm-retail spread (1982-84=100)	126.5	141.3	152.9	150.4	151.3	162.4	146.0	166.4	175.3	182.3
Farm value-retail cost (%)	31.3	27.8	29.4	29.1	25.9	24.4	29.4	37.9	37.8	36.3
<b>Processed fruits &amp; vegetables</b>										
Retail cost (1982-84=100)	109.0	117.6	125.0	123.7	125.9	125.0	124.9	125.1	129.4	132.2
Farm value (1982-84=100)	111.1	136.6	134.6	134.3	136.8	135.8	130.5	136.5	146.4	148.2
Farm-retail spread (1982-84=100)	108.3	111.7	122.0	120.4	122.5	121.6	123.1	121.6	124.1	128.9
Farm value-retail cost (%)	24.2	27.6	25.6	25.8	25.8	25.8	24.8	25.9	26.9	26.8
<b>Fats &amp; oils</b>										
Retail cost (1982-84=100)	108.1	113.1	121.2	120.4	121.6	121.0	121.6	123.5	123.4	124.2
Farm value (1982-84=100)	74.1	103.0	95.7	102.7	88.8	95.3	93.0	93.0	96.7	108.0
Farm-retail spread (1982-84=100)	120.6	116.8	130.5	128.9	134.4	130.5	132.1	134.7	133.2	130.1
Farm value-retail cost (%)	18.6	24.5	21.2	22.9	19.2	21.2	20.6	20.3	21.1	23.4
	Annual			1989				1990		
	1987	1988	1989 P	Mar	Oct	Nov	Dec	Jan	Feb	Mar
<b>Beef, Choice</b>										
Retail price 2/ (cts./lb.)	242.5	254.7	269.9	269.5	270.8	272.9	274.4	281.3	281.5	281.5
Net carcass value 3/ (cts.)	145.3	153.9	160.6	167.4	153.8	159.8	185.9	168.7	167.9	169.2
Net farm value 4/ (cts.)	137.9	147.4	155.4	163.9	146.3	154.8	160.4	163.3	164.2	166.2
Farm-retail spread (cts.)	104.6	107.3	114.5	105.6	122.5	118.1	114.0	118.0	117.3	115.3
Carcass-retail 5/ (cts.)	97.2	100.8	109.3	102.1	117.0	113.3	108.5	112.6	113.6	112.3
Farm-carcass 6/ (cts.)	7.4	6.5	5.2	3.5	5.5	4.8	5.5	5.4	3.7	3.0
Farm value-retail price (%)	57	58	58	61	55	57	58	58	58	59
<b>Pork</b>										
Retail price 2/ (cts./lb.)	188.4	183.4	182.9	179.7	185.8	189.6	191.2	195.1	196.5	197.0
Wholesale value 3/ (cts.)	113.0	101.0	99.2	91.8	106.1	106.9	112.3	104.8	105.6	110.9
Net farm value 4/ (cts.)	82.7	69.4	70.4	63.3	75.6	73.2	78.5	76.6	78.4	83.3
Farm-retail spread (cts.)	105.7	114.0	112.5	116.4	110.2	116.4	111.7	118.5	118.1	113.7
Wholesale-retail 5/ (cts.)	75.4	82.4	83.7	87.9	79.7	82.7	78.9	90.3	90.9	88.1
Farm-wholesale 6/ (cts.)	30.3	31.6	29.8	28.5	30.5	33.7	32.8	28.2	27.2	27.6
Farm value-retail price (%)	44	38	38	35	41	39	42	39	40	42

1/ Retail costs are based on CPI-U of retail prices for domestically produced farm foods, published monthly by BLS. The farm value is the payment for the quantity of farm equivalent to the retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread, the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, distributing. 2/ Weighted average price of retail cuts from pork & choice yield grade 3 beef carcasses. Prices for BLS. 3/ Value of carcass quantity (beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts; beef adjusted for value of fat & bone byproducts. 4/ Market value to producer for live animal equivalent to 1 lb. of retail cuts, minus value of byproducts. 5/ Charges for retailing & other marketing services such as fabricating, wholesaling, in-city transportation. 6/ Charges for livestock marketing, processing, & transportation.

Information contacts: Denis Dunham (202) 796-1870, Larry Duewer (202) 786-1712.

Table 9.—Price Indexes of Food Marketing Costs

	Annual			1988	1989				1990
	1987	1988	1989	IV	I	II	III	IV	I P
	1987=100*								
Labor—hourly earnings & benefits	361.1	370.1	379.4	374.0	377.8	378.8	378.5	382.3	388.9
Processing	370.2	382.0	391.1	383.7	389.6	391.4	390.5	392.9	398.7
Wholesaling	384.2	394.1	409.2	399.8	405.1	407.6	410.9	413.1	415.9
Retailing	341.7	347.7	354.5	353.1	353.9	353.8	352.2	358.2	362.1
Packaging & containers	329.9	350.7	364.6	358.4	362.4	364.7	366.1	365.2	367.1
Paperboard boxes & containers	288.0	308.1	323.7	314.6	319.1	323.2	325.5	326.9	326.7
Metal cans	433.0	442.3	443.2	438.1	438.1	438.1	448.2	448.2	450.9
Paper bags & related products	331.3	372.2	409.2	395.7	408.3	411.5	409.2	407.7	411.5
Plastic films & bottles	280.2	305.7	313.2	317.0	318.8	316.1	311.3	306.7	308.5
Glass containers	402.0	398.9	409.9	398.2	401.2	413.1	413.5	412.0	422.2
Metal foil	222.1	266.9	274.4	284.1	282.9	278.0	271.6	265.1	250.2
Transportation services	385.0	403.5	404.9	404.8	403.2	403.5	406.2	406.6	410.9
Advertising	361.1	384.7	410.4	391.2	403.8	407.4	412.8	417.6	427.0
Fuel & power	596.7	578.2	619.4	571.1	601.1	614.8	620.0	641.5	652.6
Electric	450.5	453.3	468.9	451.3	451.3	466.1	492.0	466.4	464.2
Petroleum	561.4	502.0	592.1	474.7	580.5	583.4	580.0	664.6	693.3
Natural gas	1,049.0	1,042.1	1,070.9	1,055.3	1,073.1	1,068.6	1,067.2	1,074.8	1,092.3
Communications, water & sewage	238.4	241.3	247.3	243.0	244.5	247.0	248.9	248.7	251.5
Rent	269.6	272.6	277.1	278.0	277.4	276.8	277.1	277.1	269.5
Maintenance & repair	382.6	395.9	410.7	399.7	404.8	408.9	412.9	416.2	421.1
Business services	349.0	364.6	380.3	371.0	382.7	386.6	389.9	393.9	395.5
Supplies	286.9	305.6	321.4	315.2	321.3	323.9	321.1	319.3	318.7
Property taxes & insurance	399.6	419.9	439.7	428.3	431.4	435.8	442.3	449.4	452.7
Interest, short-term	132.9	150.3	172.1	168.0	184.9	181.8	164.2	157.6	158.0
Total marketing cost index	360.4	372.4	384.9	376.8	381.9	384.0	385.1	388.2	392.4

\* Indexes measure changes in employee earnings & benefits & in prices of supplies & services used in processing, wholesaling, & retailing U.S. farm foods purchased for at-home consumption. P = preliminary.

Information contact: Denis Dunham (202) 786-1870.



## Livestock &amp; Products

Table 10.—U.S. Meat Supply &amp; Use

	Beg. stocks	Produc- tion 1/	Imports	Total supply	Exports	Ending stocks	Consumption		Primary market price 3/
							Total	Per capita 2/	
				Million pounds 4/		Pounds			
<b>Beef</b>									
1987	412	23,566	2,269	26,247	804	388	25,257	73.4	64.00
1988	388	23,589	2,379	26,354	680	422	25,252	72.3	69.54
1989	422	23,087	2,175	25,684	1,062	335	24,287	68.9	72.52
1990 F	335	23,145	2,140	25,620	1,200	315	24,105	67.8	72-78
<b>Pork</b>									
1987	248	14,374	1,195	16,817	109	347	15,362	59.1	51.69
1988	347	15,884	1,137	17,168	195	414	16,559	63.5	43.39
1989	414	15,813	896	17,123	288	285	16,570	63.2	44.03
1990 F	285	15,531	940	16,756	275	375	16,106	60.9	52-58
<b>Veal 5/</b>									
1987	7	428	24	480	7	4	449	1.5	78.05
1988	4	396	27	427	10	5	412	1.4	89.85
1989	5	355	0	360	0	4	356	1.2	91.84
1990 F	4	328	0	332	0	4	328	1.1	92-98
<b>Lamb &amp; mutton</b>									
1987	13	315	44	372	1	8	363	1.3	78.09
1988	8	335	51	394	1	6	387	1.4	68.26
1989	6	347	63	416	2	8	406	1.5	67.32
1990 F	8	359	58	425	2	7	416	1.5	59-85
<b>Total red meat</b>									
1987	679	38,884	3,532	42,895	721	745	41,430	135.9	—
1988	745	40,004	3,594	44,343	888	847	42,610	138.6	—
1989	847	39,602	3,134	43,583	1,332	632	41,619	134.7	—
1990 F	632	39,363	3,138	43,133	1,477	701	40,955	131.2	—
<b>Broilers</b>									
1987	24	15,597	0	15,620	752	25	14,844	60.8	47.4
1988	25	16,187	0	16,212	765	36	15,410	62.5	56.3
1989	36	17,428	0	17,464	859	38	16,667	66.6	59.0
1990 F	38	18,712	0	18,751	1,070	30	17,651	70.4	52-68
<b>Mature chicken</b>									
1987	163	638	0	801	15	189	598	2.5	—
1988	188	633	0	821	26	157	639	2.6	—
1989	157	575	0	731	24	189	518	2.1	—
1990 F	189	579	0	768	25	180	563	2.2	—
<b>Turkeys</b>									
1987	178	3,832	0	4,011	33	266	3,712	15.2	57.8
1988	266	3,960	0	4,226	51	250	3,926	15.9	61.5
1989	250	4,276	0	4,526	40	236	4,250	17.1	66.7
1990 F	236	4,571	0	4,807	48	250	4,509	18.0	59-85
<b>Total poultry</b>									
1987	365	20,068	0	20,433	800	479	19,154	78.5	—
1988	479	20,780	0	21,259	842	442	19,975	81.1	—
1989	442	22,280	0	22,722	923	463	21,335	85.8	—
1990 F	463	23,862	0	24,326	1,143	460	22,723	90.6	—
<b>Red meat &amp; poultry</b>									
1987	1,044	58,752	3,532	63,328	1,521	1,224	60,583	214.4	—
1988	1,224	60,784	3,594	65,601	1,728	1,289	62,584	219.6	—
1989	1,289	61,882	3,134	66,305	2,256	1,095	62,954	220.5	—
1990 F	1,095	63,225	3,138	67,459	2,620	1,161	63,678	221.8	—

1/ Total including farm production for red meats & federally inspected plus nonfederally inspected for poultry. 2/ Retail weight basis. (The beef carcass-to-retail conversion factor was .71 for 1987, & 70.5 for 1988-90.) 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Choice steers, Omaha 1,000-1,100 lb.; pork: barrows and gilts, 7 markets; veal: farm price of calves; lamb & mutton: Choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-18 lb. young hens. 4/ Carcass weight for red meats & certified ready-to-cook for poultry. 5/ Beginning 1989 veal trade no longer reported separately. F = forecast. — = not available.

Information contacts: Polly Cochran, or Maxine Davis (202) 786-1284.

Table 11.—U.S. Egg Supply &amp; Use

	Beg. stocks	Production	Imports	Total supply	Exports	Hatch-ling use	Ending stocks	Consumption		Wholesale price*
								Total	Per capita	
										Cts./doz.
1985	11.1	5,710.1	12.7	5,733.9	70.6	548.1	10.7	5,104.5	255.9	66.4
1986	10.7	5,766.3	13.7	5,790.7	101.6	566.8	10.4	5,111.9	253.8	71.1
1987	10.4	5,868.2	6.6	5,884.2	111.2	599.1	14.4	5,159.5	253.8	61.6
1988	14.4	5,783.5	6.3	5,803.2	141.8	605.9	15.2	5,040.3	245.5	62.1
1989	15.2	5,586.8	25.2	5,627.1	91.6	641.6	10.7	4,883.3	235.8	81.9
1990 F	10.7	5,660.3	9.2	5,680.2	96.0	677.3	10.0	4,896.9	234.3	71-75

\* Cartoned grade A large eggs, New York. P = preliminary. F = forecast.

Information contact: Maxine Davis (202) 786-1714.

Table 12.—U.S. Milk Supply & Use<sup>1</sup>

	Pro- duc- tion	Farm use	Commercial		Im- ports	Total commer- cial supply	CCC net re- movals	Commercial		All milk price 2/
			Farm market- ings	Beg. stock				Ending stocks	Disap- pear- ance	
	Billion pounds									
1982	135.5	2.4	133.1	5.4	2.5	141.0	14.3	4.6	122.1	13.61
1983	139.6	2.4	137.2	4.6	2.6	144.4	16.6	5.2	122.4	13.58
1984	135.4	2.9	132.4	5.2	2.7	140.4	8.6	4.9	126.8	13.46
1985	143.0	2.5	140.6	4.9	2.8	148.3	13.2	4.6	130.5	12.75
1986	143.1	2.4	140.7	4.6	2.7	148.1	10.6	4.2	133.3	12.51
1987	142.7	2.3	140.5	4.2	2.5	147.1	6.7	4.6	135.8	12.54
1988	145.2	2.2	142.9	4.6	2.4	150.0	8.9	4.3	136.8	12.24
1989	144.3	2.1	142.2	4.3	2.5	148.9	9.0	4.1	135.8	13.54
1990 F	147.4	2.1	145.3	4.1	2.4	151.8	7.2	4.6	140.0	12.80

<sup>1/</sup> Milkfat basis. Totals may not add because of rounding. <sup>2/</sup> Delivered to plants & dealers; does not reflect deductions. F = forecast.

Information contact: Jim Miller (202) 786-1770.

Table 13.—Poultry &amp; Eggs

	Annual			1989				1990		
	1987	1988	1989	Mar	Oct	Nov	Dec	Jan	Feb	Mar
<b>Broilers</b>										
Federally inspected slaughter, certified (mil. lb.)	15,502.5	16,124.4	17,334.2	1,473.4	1,497.1	1,432.2	1,491.1	1,519.6	1,367.7	1,607.6
Wholesale price, 12-city (cts./lb.)	47.4	56.3	59.0	62.1	51.7	49.2	48.4	51.7	57.4	60.4
Price of grower feed (\$/ton)	186	220	235	250	223	221	220	224	223	221
Broiler-feed price ratio 1/	3.7	3.1	3.1	3.1	2.7	2.7	2.8	2.7	3.0	3.3
Stocks beginning of period (mil. lb.)	23.9	24.8	35.9	32.5	35.9	34.5	40.6	38.3	28.2	22.7
Broiler-type chicks hatched (mil.) 2/	5,379.2	5,602.4	5,944.3	503.5	484.4	469.6	522.1	516.3	472.9	543.1
<b>Turkeys</b>										
Federally inspected slaughter, certified (mil. lb.)	3,717.1	3,923.4	4,174.8	301.3	422.6	423.1	334.9	319.0	297.8	366.6
Wholesale price, Eastern U.S., 8-16 lb. young hens (cts./lb.)	57.8	61.2	66.7	65.7	67.8	72.5	72.7	65.6	65.2	58.9
Price of turkey grower feed (\$/ton)	213	243	262	258	243	241	240	239	241	240
Turkey-feed price ratio 1/	3.9	3.0	3.2	3.1	3.2	3.4	3.3	3.0	2.8	3.1
Stocks beginning of period (mil. lb.)	178.2	266.2	249.7	263.1	589.3	571.8	258.6	235.9	267.1	276.3
Poulets placed in U.S. (mil.)	264.2	261.4	269.0	27.0	20.2	20.7	21.5	24.7	24.9	27.3
<b>Eggs</b>										
Farm production (mil.)	70,418	66,402	67,041	5,794	5,648	5,556	5,772	5,695	5,155	5,834
Average number of layers (mil.)	284	277	299	270	268	270	271	271	272	272
Rate of lay (eggs per layer on farms)	248	251	250	21.4	21.0	20.6	21.3	20.9	19.0	21.5
Cartoned price, New York, grade A large (cts./doz.) 3/	61.6	62.1	61.9	62.2	64.8	63.4	69.6	62.4	79.6	61.5
Price of laying feed (\$/ton)	170	202	209	214	200	199	200	199	198	198
Egg-feed price ratio 1/	6.3	5.3	6.7	7.5	7.1	7.9	6.3	6.4	7.1	6.0
<b>Stocks, first of month</b>										
Shell (mil. doz.)	0.66	1.29	0.27	0.21	0.69	0.18	0.33	0.36	0.66	0.48
Frozen (mil. doz.)	9.6	13.1	14.9	14.4	10.9	11.3	10.2	10.3	10.8	11.5
<b>Replacement chicks hatched (mil.)</b>	428	368	384	32.6	33.3	29.7	29.3	32.0	32.2	36.4

1/ Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. 2/ Placement of broiler chicks is currently reported for 15 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. 3/ Price of cartoned eggs to volume buyers for delivery to retailers.

Information contact: Maxine Davis (202) 786-1714.

Table 14.—Dairy

	Annual			1989				1990		
	1987	1988	1989	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	11.23	11.03	12.37	10.98	13.87	14.69	14.93	13.94	12.21	12.02
Wholesale prices										
Butter, grade A Chl. (cts./lb.)	140.2	132.5	127.9	131.0	120.5	120.5	120.0	110.8	108.3	108.3
Am. cheese, Wis. assembly pt. (cts./lb.)	123.2	123.8	138.8	117.8	160.3	163.8	162.2	152.3	131.8	130.7
Nonfat dry milk (cfs./lb.) 2/	79.3	80.2	105.5	79.8	139.9	158.7	128.0	88.2	82.3	86.8
USDA net removals										
Total milk equiv. (mil. lb.) 3/	6,708.0	8,858.2	8,967.9	1,156.5	158.4	163.7	463.4	1,490.9	1,244.9	938.7
Butter (mil. lb.)	187.3	312.6	413.4	54.4	7.4	7.7	22.1	71.8	59.9	45.0
Am. cheese (mil. lb.)	282.0	238.1	37.4	3.0	0	0	0	0	0	0
Nonfat dry milk (mil. lb.)	559.4	267.5	0	0	0	0	0	2.9	-0.7	0
Milk										
Milk prod. 21 States (mil. lb.)	121,431	123,518	122,531	10,825	9,878	9,854	10,047	10,479	9,813	10,993
Milk per cow (lb.)	13,999	14,291	14,370	1,268	1,161	1,132	1,176	1,227	1,150	1,291
Number of milk cows (1,000)	8,693	8,643	8,527	8,540	8,510	8,531	8,544	8,537	8,534	8,513
U.S. milk production (mil. lb.)	142,709	145,152	144,252	6/ 12,736	6/ 11,661	6/ 11,396	6/ 11,860	6/ 12,359	6/ 11,574	6/ 12,966
Stock, beginning										
Total (mil. lb.)	12,887	7,440	8,189	10,489	12,138	11,138	9,808	8,795	9,294	9,819
Commercial (mil. lb.)	4,165	4,646	4,289	5,124	5,258	4,893	4,196	4,131	4,509	4,712
Government (mil. lb.)	8,702	2,794	3,900	5,345	6,881	6,243	5,410	4,664	4,785	5,107
Imports, total (mil. lb.) 3/	2,400	2,394	2,499	175	237	263	285	193	194	—
Commercial disappearance (mil. lb.)	135,754	136,805	135,843	11,742	11,927	12,019	11,559	10,508	10,162	—
Butter										
Production (mil. lb.)	1,104.1	1,207.5	1,273.5	136.2	95.1	94.4	107.5	127.1	115.7	120.2
Stocks, beginning (mil. lb.)	193.0	143.2	214.7	314.4	407.9	370.8	294.1	258.2	262.0	285.1
Commercial disappearance (mil. lb.)	902.8	909.8	854.1	87.4	87.3	116.5	87.5	57.4	64.3	—
American cheese										
Production (mil. lb.)	2,716.7	2,756.6	2,672.6	233.7	209.2	208.4	230.8	231.7	239.8	255.2
Stocks, beginning (mil. lb.)	697.1	370.4	293.0	295.8	276.8	253.8	238.0	238.2	262.1	272.4
Commercial disappearance (mil. lb.)	2,437.1	2,570.0	2,681.6	239.4	231.4	223.4	231.9	207.2	229.8	—
Other cheese										
Production (mil. lb.)	2,627.7	2,815.4	2,941.3	261.2	254.9	248.6	258.7	252.1	232.1	274.8
Stocks, beginning (mil. lb.)	92.0	89.7	104.7	111.4	98.8	81.3	95.4	93.2	99.3	103.8
Commercial disappearance (mil. lb.)	2,660.2	3,034.5	3,208.9	278.9	299.7	282.1	293.2	259.9	246.1	—
Nonfat dry milk										
Production (mil. lb.)	1,056.8	979.7	874.7	95.1	48.2	51.2	64.8	61.4	71.2	77.4
Stocks, beginning (mil. lb.)	688.8	177.2	53.1	84.4	44.8	36.2	32.5	49.5	49.4	58.8
Commercial disappearance (mil. lb.)	492.9	734.3	873.0	90.4	58.9	55.2	48.7	58.7	62.9	—
Frozen dessert										
Production (mil. gal.) 4/	1,280.7	1,248.0	1,214.0	108.0	89.7	83.7	77.1	79.5	85.4	103.9
1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area. 3/ Milk equivalent, fat basis. 4/ Ice cream, ice milk, & hard sherbet. 5/ Based on average milk price after adjustment for price support deductions. 6/ Estimated. P = preliminary. — = not available.										

Information contact: Jim Miller (202) 786-1770.

Table 15.—Wool

	Annual			1989			1990			
	1987	1988	1989	Apr	Nov	Dec	Jan	Feb	Mar	Apr
U.S. wool price, (cts./lb.) 1/	265	438	370	375	333	300	294	287	287	284
Imported wool price, (cts./lb.) 2/	247	372	354	363	335	338	334	325	321	335
U.S. mill consumption, scoured 3/										
Apparel wool (1,000 lb.)	129,677	117,089	112,998	9,898	7,765	9,057	—	—	—	—
Carpet wool (1,000 lb.)	13,092	15,633	14,122	1,427	842	1,002	—	—	—	—

1/ Wool price delivered at U.S. mills, clean basis. Graded Territory 64's (20.80-22.04 microns) staple 2-3/4" & up. 2/ Wool price, Charleston, SC warehouse, clean basis. Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. 3/ Beginning 1990 mill consumption reported only on a quarterly basis. — = not available.

Information contact: John Lawler (202) 786-1840.

Table 16.—Meat Animals

	Annual			1989				1990		
	1987	1988	1989	Mar	Oct	Nov	Dec	Jan	Feb	Mar
<b>Cattle on feed (7 States)</b>										
Number on feed (1,000 head) 1/	7,953	8,411	8,045	7,931	8,958	7,911	8,331	8,378	8,528	8,319
Placed on feed (1,000 head)	21,040	20,854	20,834	2,065	2,652	2,001	1,552	1,896	1,403	1,902
Marketings (1,000 head)	19,545	19,918	19,422	1,579	1,628	1,490	1,418	1,834	1,515	1,818
Other disappearance (1,000 head)	1,217	1,202	1,079	75	71	91	87	114	95	120
<b>Beef steer—corn price ratio, Omaha 2/</b>	41.0	31.5	30.3	29.4	31.1	32.2	32.8	34.2	34.0	32.6
<b>Hog—corn price ratio, Omaha 2/</b>	32.8	19.6	18.4	15.4	20.8	20.1	21.7	21.6	22.0	21.9
<b>Market prices (\$/cwt)</b>										
<b>Slaughter cattle</b>										
Choice steers, Omaha	64.60	69.54	72.52	75.75	69.69	72.48	75.21	76.73	76.81	78.15
Utility cows, Omaha	44.83	46.55	47.88	45.89	49.42	46.60	49.38	49.78	52.79	54.87
Choice vealers, S. St. Paul 3/	78.92	90.23	248.62	257.50	244.38	242.80	230.00	248.50	255.00	NQ
<b>Feeder cattle</b>										
Choice, Kansas City, 600–700 lb.	75.36	83.67	86.13	84.45	88.25	87.38	86.25	85.70	84.88	87.50
<b>Slaughter hogs</b>										
Barrows & gilts, 7-markets	51.69	43.39	44.03	39.85	47.15	45.77	49.33	47.94	48.51	51.91
<b>Feeder pigs</b>										
S. Mo. 40–50 lb. (per head)	46.69	36.06	33.63	39.55	37.25	38.33	36.21	44.58	54.41	63.19
<b>Slaughter sheep &amp; lambs</b>										
Lambs, Choice, San Angelo	78.09	68.26	67.32	70.90	59.63	56.08	60.83	54.80	60.38	63.69
Ewes, Good, San Angelo	38.62	38.88	38.58	47.55	28.00	35.25	39.42	38.30	38.47	38.81
<b>Feeder lambs</b>										
Choice, San Angelo	102.26	90.89	79.85	95.30	74.88	74.88	76.00	72.10	74.88	75.63
<b>Wholesale meat prices, Midwest</b>										
Choice steer beef, 600–700 lb.	97.24	103.34	107.78	112.43	103.13	107.05	111.41	113.30	112.80	113.65
Canner & cutter cow beef	85.26	87.77	94.43	92.17	96.14	92.92	100.73	99.89	100.95	102.04
Pork loins, 14–18 lb. 4/	108.23	97.49	101.09	91.77	111.78	91.75	107.28	101.38	107.75	117.26
Pork bellies, 12–14 lb.	83.11	41.25	34.14	30.19	36.88	49.96	42.23	48.65	42.53	42.60
Hams, skinned, 14–17 lb.	80.96	71.03	69.38	63.00	80.56	87.00	78.89	68.44	76.50	79.00
<b>All fresh beef retail price 5/</b>	212.84	224.81	238.97	238.54	241.20	243.69	245.36	247.81	249.14	249.10
<b>Commercial slaughter (1,000 head)*</b>										
<b>Cattle</b>	35,647	35,079	33,917	2,819	2,984	2,785	2,680	2,851	2,502	2,784
Steers	17,443	17,344	16,536	1,398	1,373	1,299	1,283	1,360	1,241	1,398
Heifers	10,906	10,754	10,406	839	932	815	789	829	769	834
Cows	6,810	6,337	6,316	532	596	611	559	606	446	481
Bulls & stags	689	644	659	50	64	60	48	56	46	51
Calves	2,815	2,508	2,172	200	198	182	172	161	150	171
<b>Sheep &amp; lambs</b>	5,199	5,293	5,464	520	484	481	469	489	441	493
<b>Hogs</b>	81,081	87,795	88,693	7,763	8,032	8,039	7,233	7,605	6,820	7,454
<b>Commercial production (mil. lb.)</b>										
Beef	23,405	23,424	22,974	1,687	2,041	1,906	1,827	1,932	1,705	1,870
Veal	418	387	344	31	31	28	25	27	24	28
Lamb & mutton	309	329	341	34	30	31	31	32	29	32
Pork	14,312	15,623	16,759	1,373	1,421	1,446	1,288	1,359	1,215	1,328
	Annual			1988	1989				1990	
	1987	1988	1989	IV	I	II	III	IV	I	II
<b>Cattle on feed (13 States)</b>										
Number on feed (1,000 head) 1/	9,555	10,114	9,688	8,851	9,688	9,918	8,680	8,276	9,943	10,063
Placed on feed (1,000 head)	25,074	24,423	24,484	6,655	6,232	5,212	5,719	7,321	6,088	—
Marketings (1,000 head)	23,126	23,459	22,955	5,466	5,658	6,040	5,896	5,361	5,583 7/	6,088
Other disappearance (1,000 head)	1,389	1,390	1,274	352	344	410	227	293	365	—
<b>Hogs &amp; pigs (10 States) 6/</b>										
Inventory (1,000 head) 1/	39,730	42,675	43,210	45,000	43,210	41,855	44,020	45,200	42,200	40,470
Breeding (1,000 head) 1/	5,125	5,435	5,335	5,460	5,335	5,440	5,565	5,335	5,280	5,250
Market (1,000 head) 1/	34,605	37,240	37,875	39,540	37,875	36,215	39,455	39,865	36,920	35,220
Farrowings (1,000 head)	8,853	9,370	9,203	2,301	2,109	2,580	2,324	2,190	2,025 7/	2,498
Pig crop (1,000 head)	68,955	72,268	71,807	17,520	16,441	20,309	18,167	16,890	15,841	—

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Per head starting September 1988. 4/ Prior to 1984, 8–14 lb.; 1984 & 1985, 14–17 lb.; beginning 1986, 14–18 lb. 5/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in table 8. 6/ Quarters are Dec. of preceding year–Feb. (I), Mar.–May (II), June–Aug. (III), & Sept.–Nov. (IV). 7/ Intentions. \*Classes estimated. NQ = not quote. — = not available.

Information contacts: Polly Cochran (202) 786-1284.



## Crops &amp; Products

Table 17.—Supply & Utilization<sup>1,2</sup>

	Area				Production	Total supply <sup>4/</sup>	Feed and residual	Other domestic use	Exports	Total use	Ending stocks	Farm price <sup>5/</sup>
	Set aside <sup>3/</sup>	Planted	Harvested	Yield								
	Mil. acres		Bu./acre					Mil. bu.				\$/bu.
Wheat												
1985/86	18.8	75.6	64.7	37.5	2,425	3,886	279	767	815	1,961	1,905	3.08
1986/87	21.0	72.1	60.7	34.4	2,092	4,018	413	780	1,004	2,187	1,821	2.42
1987/88	23.9	65.8	56.0	37.7	2,107	3,945	280	806	1,598	2,684	1,261	2.57
1988/89*	22.5	65.5	53.2	34.1	1,812	3,096	137	839	1,410	2,394	702	3.72
1989/90*	9.7	76.6	62.1	32.8	2,038	2,758	190	852	1,275	2,317	442	3.71
1990/91*					2,692	3,155	275	865	1,250	2,390	765	2.90-3.30
Rice												
	Mil. acres		Lb./acre					Mil. cwt (rough equiv.)				\$/cwt
1985/86	1.24	2.51	2.49	5,414	134.9	201.8	—	6/65.8	58.7	124.5	77.3	6.53
1986/87	1.48	2.38	2.36	5,651	133.4	213.3	—	6/77.7	84.2	161.9	51.4	3.75
1987/88	1.57	2.36	2.33	5,555	129.8	184.0	—	6/80.4	72.2	152.6	31.4	7.27
1988/89*	1.09	2.93	2.90	5,514	159.9	195.4	—	6/83.2	85.6	168.8	26.7	6.83
1989/90*	1.21	2.73	2.69	5,749	154.5	185.9	—	6/85.2	77.0	162.2	23.7	7.25-7.50
1990/91*					180.0	188.7	—	6/87.4	76.0	163.4	25.3	6.00-8.00
Corn												
	Mil. acres		Bu./acre					Mil. bu.				\$/bu.
1985/86	5.4	83.4	75.2	118.0	8,877	10,536	4,095	1,160	1,241	6,498	4,040	2.23
1986/87	14.3	76.7	69.2	119.3	8,250	12,291	4,714	1,192	1,504	7,410	4,882	1.50
1987/88	23.0	65.7	59.2	119.8	7,131	12,016	4,805	1,229	1,723	7,757	4,259	1.94
1988/89*	20.5	67.6	58.3	84.6	4,929	9,191	3,987	1,245	2,028	7,260	1,930	2.54
1989/90*	10.1	72.3	64.8	118.2	7,527	9,460	4,550	1,280	2,300	8,130	1,330	2.30-2.40
1990/91*					8,100	9,432	4,650	1,315	2,200	8,185	1,267	2.25-2.65
Sorghum												
	Mil. acres		Bu./acre					Mil. bu.				\$/bu.
1985/86	0.9	18.3	16.8	66.8	1,120	1,420	664	28	178	889	551	1.93
1986/87	3.0	15.3	13.9	67.7	938	1,489	535	12	198	746	743	1.37
1987/88	4.1	11.8	10.5	69.4	731	1,474	555	25	231	811	663	1.70
1988/89*	3.9	10.4	9.0	63.8	577	1,239	468	22	310	800	440	2.27
1989/90*	2.9	11.9	11.2	65.4	618	1,057	525	15	250	790	267	2.05-2.15
1990/91*					685	952	500	15	250	785	187	2.05-2.45
Barley												
	Mil. acres		Bu./acre					Mil. bu.				\$/bu.
1985/86	0.7	13.2	11.8	51.0	591	848	333	169	22	523	325	1.98
1986/87	2.1	13.1	12.0	50.8	611	944	298	174	137	608	338	1.81
1987/88	2.9	11.0	9.9	52.4	521	869	254	174	120	548	321	1.81
1988/89*	2.8	9.9	7.6	38.0	290	622	166	180	79	425	196	2.80
1989/90*	2.2	9.2	8.3	48.6	403	610	175	180	85	440	170	2.40
1990/91*					415	595	175	185	85	445	150	2.30-2.70
Oats												
	Mil. acres		Bu./acre					Mil. bu.				\$/bu.
1985/86	0.1	13.3	8.2	63.7	521	728	460	82	2	544	184	1.23
1986/87	0.6	14.7	6.9	56.3	386	603	395	73	3	471	133	1.21
1987/88	0.8	18.0	6.9	54.0	374	552	358	81	1	440	112	1.56
1988/89*	0.3	13.9	5.5	39.3	218	393	194	100	1	294	98	2.61
1989/90*	0.3	12.1	6.9	54.4	374	537	300	115	1	416	122	1.48
1990/91*					350	537	300	120		421	118	1.30-1.70
Soybeans												
	Mil. acres		Bu./acre					Mil. bu.				\$/bu.
1985/86	0	63.1	61.6	34.1	2,099	2,415	0	1,053	740	1,879	536	5.05
1986/87	0	60.4	58.3	33.3	1,940	2,476	0	1,179	757	2,040	436	4.78
1987/88	0	58.2	57.2	33.9	1,938	2,374	0	1,174	802	2,072	302	5.88
1988/89*	0	58.9	57.4	27.0	1,549	1,855	0	1,058	527	1,673	182	7.42
1989/90*	0	60.5	59.4	32.4	1,927	2,112	0	1,100	610	1,807	305	5.85
1990/91*					1,925	2,233	0	1,155	625	1,878	355	4.75-6.25
Soybean oil												
								Mil. lbs.				7/ Cts./lb.
1985/86	—	—	—	—	11,617	12,257	—	10,053	1,257	11,310	947	18.00
1986/87	—	—	—	—	12,783	13,745	—	10,833	1,187	12,020	1,725	15.40
1987/88	—	—	—	—	12,974	8/ 14,895	—	10,930	1,873	12,803	2,092	22.65
1988/89*	—	—	—	—	11,737	8/ 13,967	—	10,591	1,661	12,252	1,715	21.10
1989/90*	—	—	—	—	12,320	8/ 14,050	—	11,600	1,500	13,100	950	21.50
1990/91*	—	—	—	—	12,850	8/ 13,850	—	11,650	1,400	13,050	800	21.0-25.0
Soybean meal												
								1,000 tons				\$/ton
1985/86	—	—	—	—	24,951	25,338	—	19,090	6,038	25,128	212	155
1986/87	—	—	—	—	27,758	27,970	—	20,387	7,343	27,730	240	163
1987/88	—	—	—	—	28,060	28,300	—	21,293	6,854	28,147	153	222
1988/89*	—	—	—	—	24,943	25,100	—	19,798	5,129	24,927	173	233
1989/90*	—	—	—	—	26,327	26,500	—	21,700	4,550	26,250	250	172
1990/91*	—	—	—	—	27,500	27,750	—	22,300	5,150	27,450	300	145-175

See footnotes at end of table.

Table 17.—Supply &amp; Utilization, continued

	Area			Yield	Production	Total supply	Feed and residual	Other domestic use	Exports	Total use	Ending Stocks	Farm Price
	Set Aside 3/	Planted	Harvested									
	Mil. acres			Lb./acre			Mil. bales					
Cotton 10/												
1985/86	3.6	10.7	10.2	630	13.4	17.6	—	6.4	2.0	8.4	9.4	56.50
1986/87	4.2	10.0	8.5	552	9.7	19.1	—	7.4	6.7	14.1	5.0	52.40
1987/88	4.0	10.4	10.0	706	14.8	19.8	—	7.6	6.6	14.2	5.8	64.30
1988/89*	2.2	12.5	11.9	619	15.4	21.2	—	7.8	6.2	13.9	7.1	66.60
1989/90*	3.5	10.6	9.5	619	12.2	19.3	—	8.3	7.8	16.1	3.3	65.6
1990/91*					16.0	19.3	—	6.0	7.5	15.5	3.9	—

\* May 10, 1990 Supply and Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, & oats, August 1 for cotton & rice, September 1 for soybeans, corn, & sorghum, October 1 for soybean meal & soybean oil. 2/ Conversion factors: Hectare (ha.) = 2.471 acres, 1 metric ton = 2,204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt of rice, and 4.59 480-pound bales of cotton. 3/ Includes diversion, PIK, acreage reduction, 50-92, & 0-92 programs. 4/ Includes imports. 5/ Market average prices do not include an allowance for loans outstanding & Government purchases. 6/ Residual included in domestic use. 7/ Average of crude soybean oil, Decatur. 8/ Includes 100 million pounds in imports for 1987/88, 140 million in 1988/89, 15 million in 1989/90, and 50 million in 1990/91. 9/ Average of 44 percent, Decatur. 10/ Upland & extra long staple. Stocks estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. — = not available or not applicable.

Information contact: Commodity Economics Division, Crops Branch (202) 786-1840

Table 18.—Food Grains

	Marketing year 1/				1989			1990		
	1985/86	1986/87	1987/88	1988/89	Mar	Nov	Dec	Jan	Feb	Mar
Wholesale prices										
Wheat, No. 1 HRW, Kansas City (\$/bu.) 2/	3.28	2.72	2.96	4.17	4.32	4.36	4.39	4.30	4.14	4.04
Wheat, DNS, Minneapolis (\$/bu.) 2/	3.25	2.82	2.92	4.25	4.48	NQ	NQ	NQ	NQ	NQ
Rice, S.W. La. (\$/cwt) 3/	16.11	10.25	19.25	14.85	13.80	15.00	14.65	15.40	15.65	15.40
Wheat										
Exports (mil. bu.)	915	1,004	1,592	1,424	149	76	85	83	91	—
Mill grind (mil. bu.)	703	765	753	778	61	69	63	63	64	—
Wheat flour production (mil. cwt)	314	335	336	348	27	30	28	28	28	29.3
Rice										
Exports (mil. cwt, rough equiv.)	68.7	64.2	72.2	85.6	6.6	8.2	6.6	7.6	6.3	—
	Marketing year 1/				1988			1989		
	1986/87	1987/88	1988/89		Jun-Aug	Sept-Nov	Dec-Feb	Mar-May	June-Aug	Sept-Nov
Wheat										
Stocks, beginning (mil. bu.)	1,905	1,821	1,261	1,260.8	2,253.6	1,715.9	1,227.7	701.6	1,917.2	1,423.7
Domestic use										
Food (mil. bu.)	712	721	735	183.3	197.3	178.3	176.0	192.7	196.0	179.0
Seed, feed & residual (mil. bu.) 4/	485	365	240	283.2	17.6	-46.9	-13.8	263.5	-25.7	25.2
Exports (mil. bu.)	999	1,598	1,419	361.8	329.0	360.5	366.0	369.9	326.6	280.0

1/ Beginning June 1 for wheat & August 1 for rice. 2/ Ordinary protein. 3/ Long grain, milled basis. 4/ Residual includes feed use. — = not available. NQ = no quote.

Information contacts: Ed Allen & Janet Livezey (202) 786-1840.

Table 19.—Cotton

	Marketing year 1/				1989			1990		
	1985/86	1986/87	1987/88	1988/89	Mar	Nov	Dec	Jan	Feb	Mar
U.S. price, SLM, 1-1/16 in. (cts./lb.) 2/	60.0	53.2	63.1	57.7	57.6	68.3	63.6	62.2	65.0	68.1
Northern Europe price index (cts./lb.) 3/	48.9	62.0	72.7	66.4	66.0	82.1	77.3	74.9	76.9	79.2
U.S. M 1-3/32 in. (cts./lb.) 4/	64.8	61.8	76.3	69.2	70.0	82.1	76.3	74.3	77.0	80.2
U.S. mill consumpt. (1,000 bales)	6,399	7,452	7,617	7,782	722	702	551	724	663	736
Exports (1,000 bales)	1,969	6,684	6,582	6,148	829	520	683	875	797	—
Stocks, beginning (1,000 bales)	4,102	9,348	5,026	5,771	13,835	9,248	12,700	12,699	11,634	9,965

1/ Beginning August 1. 2/ Average spot market. 3/ Liverpool Outlook (A) Index: average of five lowest priced of 11 selected growths. 4/ Memphis territory growths. — = not available.

Information contact: Scott Sanford (202) 786-1840.

Table 20.—Feed Grains

	Marketing year 1/				1989			1990		
	1985/86	1986/87	1987/88	1988/89	Mar	Nov	Dec	Jan	Feb	Mar
<b>Wholesale prices</b>										
Corn, no. 2 yellow, 30 day, Chicago (\$/bu.)	2.35	1.64	2.14	2.66	2.78	2.37	2.34	2.36	2.41	2.50
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	3.72	2.73	3.40	4.17	4.32	4.00	3.98	4.00	3.84	3.46
Barley, feed, Duluth (\$/bu.) 2/	1.53	1.44	1.78	2.31	2.49	2.15	2.23	2.28	2.20	2.26
Barley, malting, Minneapolis (\$/bu.)	2.24	1.89	2.04	4.11	4.33	3.18	3.19	3.20	3.02	2.83
<b>Exports 3/</b>										
Corn (mil. bu.)	1,241	1,504	1,723	2,036	192	294	258	239	155	202
Feed grains (mil. metric tons) 4/	36.6	46.3	52.3	61.3	6.0	8.2	7.3	7.0	4.8	5.8
	Marketing year 1/				1988			1989		
	1985/86	1986/87	1987/88	1988/89	Sept-Nov	Dec-Feb	Mar-May	June-Aug	Sept-Nov	Dec-Feb
<b>Corn</b>										
Stocks, beginning (mil. bu.)	1,648	4,040	4,882	4,259	4,259	7,072	5,204	3,419	1,930	7,079
<b>Domestic use</b>										
Feed (mil. bu.)	4,095	4,714	4,805	3,979	1,334	1,082	849	690	1,497	1,231
Food, seed, ind. (mil. bu.)	1,180	1,192	1,229	1,245	294	284	337	330	300	300
Exports (mil. bu.)	1,241	1,504	1,723	2,036	482	508	600	470	582	692
Total use (mil. bu.)	6,496	7,410	7,757	7,260	2,109	1,869	1,787	1,490	2,379	2,223

1/ September 1 for corn & sorghum; June 1 for oats & barley. 2/ Beginning March 1987 reporting point changed from Minneapolis to Duluth. 3/ Includes products. 4/ Aggregated data for corn, sorghum, oats, & barley. P = preliminary. — not available.

Information contact: James Cole (202) 786-1840.

Table 21.—Fats &amp; Oils

	Marketing year *				1989				1990	
	1985/86	1986/87	1987/88	1988/89	Feb	Oct	Nov	Dec	Jan	Feb
<b>Soybeans</b>										
Wholesale price, no. 1 yellow, Chicago (\$/bu.)	5.20	5.03	6.67	7.41	7.45	5.61	5.76	5.74	5.60	5.66
Crushings (mil. bu.)	1,052.8	1,178.8	1,174.5	1,057.7	85.8	94.8	104.1	105.4	107.2	91.8
Exports (mil. bu.)	740.7	756.9	801.6	530.6	56.8	74.2	78.7	65.8	77.4	75.0
Stocks, beginning (mil. bu.)	316.0	536.4	436.4	302.5	131.9	24.5	96.3	106.5	89.7	93.6
<b>Soybean oil</b>										
Wholesale price, crude, Decatur (cts./lb.)	18.02	15.36	22.67	21.09	21.2	19.0	18.7	18.1	19.3	19.3
Production (mil. lb.)	11,617.3	12,783.1	12,974.5	11,737.0	952.3	1,057.3	1,145.7	1,161.2	1,187.4	1,021.7
Domestic disp. (mil. lb.)	10,045.9	10,820.2	10,734.1	10,455.6	687.2	1,134.2	1,045.4	975.2	1,036.9	900.1
Exports (mil. lb.)	1,257.3	1,184.5	1,873.2	1,658.2	65.8	123.9	82.5	113.4	95.4	136.2
Stocks, beginning (mil. lb.)	632.5	946.6	1,725.0	2,092.2	2,703.2	1,715.4	1,514.6	1,532.4	1,604.9	1,717.5
<b>Soybean meal</b>										
Wholesale price, 44% protein, Decatur (\$/ton)	154.88	162.61	221.90	233.46	234.10	191.60	183.40	179.4	172.30	161.90
Production (1,000 ton)	24,951.3	27,758.8	28,060.2	24,942.7	2,036.3	2,246.2	2,492.5	2,519.6	2,548.6	2,170.9
Domestic disp. (1,000 ton)	19,117.2	20,387.4	21,275.9	19,792.6	1,570.8	1,933.5	2,147.4	1,820.6	2,052.4	1,602.6
Exports (1,000 ton)	6,009.3	7,343.0	6,871.0	5,130.8	512.1	265.0	371.4	565.1	570.4	560.1
Stocks, beginning (1,000 ton)	386.9	211.7	240.2	153.5	442.3	172.9	220.5	194.3	328.2	254.0
<b>Margarine, wholesale price, Chicago, white (cts./lb.)</b>										
	51.2	40.3	40.3	52.3	54.0	51.7	52.1	52.4	52.6	53.6

\* Beginning September 1 for soybeans; October 1 for soybean meal & oil; calendar year for margarine.

Information contacts: Roger Hoskin (202) 786-1840, Tom Bickerton (202) 786-1824.

Table 22.—Farm Programs, Price Supports, Participation &amp; Payment Rates

	Target price	Loan rate	Findley loan rate	Payment rates		PIK	Base acres 1/	Program 2/	Participation rate 3/
				Deficiency	Paid land diversion				
			\$/bu.			Percent 4/	Mil. acres		Percent of base
<b>Wheat</b>									
1984/85	4.38	3.30	—	1.00	2.70	85	94.0	20/10/10-20	60/80/20
1985/86	4.38	3.30	—	1.08	2.70	—	94.0	20/10/0	73
1986/87 5/	4.38	3.00	2.40	1.98	2.00	1.10	91.6	22.5/2 5/5-10	85/85/21
1987/88	4.38	2.85	2.28	1.81	—	—	87.8	27.5/0/0	88
1988/89	4.23	2.76	2.21	0.99	—	—	84.8	27.5/0/0	88
1989/90	4.10	2.58	2.08	7/ .32	—	—	82.3	10/0/0	78
1990/91	4.00	2.44	1.95	—	—	—	—	5/0/0	—
<b>Rice</b>			\$/cwt						
1984/85	11.90	8.00	—	3.76	—	—	4.1	25/0/0	85
1985/86	11.90	8.00	8/ 3.16	3.90	3.50	—	4.2	20/15/0	90
1986/87 5/	11.90	7.20	8/ 3.82	4.70	—	—	4.2	35/0/0	94
1987/88	11.68	6.84	6/ 5.77	4.82	—	—	4.1	35/0/0	96
1988/89	11.15	6.63	6/ 6.30	4.31	—	—	4.1	25/0/0	94
1989/90	10.80	6.50	6/ 6.50	3.50	—	—	4.1	25/0/0	95
1990/91	10.71	6.50	—	—	—	—	—	20/0/0	95
<b>Corn</b>			\$/bu.						
1984/85	3.03	2.55	—	0.43	—	—	80.8	10/0/0	54
1985/86	3.03	2.55	—	0.48	—	—	84.2	10/0/0	69
1986/87 5/	3.03	2.40	1.92	1.11	—	—	81.7	17.5/2.5/0	86
1987/88	3.03	2.28	1.82	1.09	2.00	—	81.5	20/15/0	90
1988/89	2.93	2.21	1.77	7/ .38	1.75	—	82.9	20/10/0; 0/92	87
1989/90	2.84	2.06	1.65	7/ .64	—	—	82.7	10/0/0; 0/92	81
1990/91	2.75	1.96	1.57	—	—	—	—	10/0/0; 0/92	—
<b>Sorghum</b>			\$/bu.						
1984/85	2.88	2.42	—	0.46	—	—	18.4	8/ (same)	42
1985/86	2.88	2.42	—	0.46	—	—	19.3	—	55
1986/87 5/	2.88	2.28	1.82	1.06	0.85	—	19.0	—	75
1987/88	2.88	2.17	1.74	1.14	1.90	—	17.4	—	84
1988/89	2.78	2.10	1.68	0.48	1.65	—	18.8	—	82
1989/90	2.70	1.98	1.57	7/ .70	—	—	16.2	—	79
1990/91	2.61	1.86	1.49	—	—	—	—	—	—
<b>Barley</b>			\$/bu.						
1984/85	2.60	2.08	—	0.26	—	—	11.8	8/ (same)	44
1985/86	2.60	2.08	—	0.52	—	—	13.3	—	57
1986/87 5/	2.60	1.95	1.56	0.89	0.57	—	12.4	—	72
1987/88	2.60	1.88	1.49	0.79	1.80	—	12.5	—	84
1988/89	2.51	1.80	1.44	0.00	1.40	—	12.5	—	79
1989/90	2.43	1.68	1.34	7/ .23	—	—	12.4	—	69
1990/91	2.36	1.60	1.28	—	—	—	—	—	—
<b>Oats</b>			\$/bu.						
1984/85	1.60	1.31	—	0	—	—	9.8	8/ (same)	14
1985/86	1.60	1.31	—	0.29	—	—	9.4	—	14
1986/87 5/	1.60	1.23	0.99	0.39	0.36	—	9.2	—	37
1987/88	1.60	1.17	0.94	0.20	0.80	—	8.4	—	45
1988/89	1.55	1.13	0.90	11/ 0.00	—	—	7.9	5/0/0; 0/92	30
1989/90	1.50	1.06	0.85	0.00	—	—	7.6	5/0/0; 0/92	23
1990/91	1.45	1.01	0.81	—	—	—	—	5/0/0; 0/92	—
<b>Soybeans 9/</b>			\$/bu.						
1984/85	—	5.02	—	—	—	—	—	—	—
1985/86	—	5.02	—	—	—	—	—	—	—
1986/87 5/	—	4.77	—	—	—	—	—	—	—
1987/88	—	4.77	—	—	—	—	—	—	—
1988/89	—	4.77	—	—	—	—	—	—	—
1989/90	—	4.53	—	—	—	—	—	10/ 10/25	—
<b>Upland cotton</b>			Cts./lb.						
1984/85	81.0	55.00	—	18.60	—	—	15.6	25/0/0	70
1985/86	81.0	57.30	—	23.70	30.00	—	16.9	20/10/0	82/0/0
1986/87 5/	81.0	55.00	11/ 44.00	26.00	—	—	15.5	25/0/0	93
1987/88	79.4	52.25	12/ —	17.3	—	—	14.6	25/0/0	93
1988/89	75.9	51.80	12/ —	19.4	—	—	14.5	12.5/0/0	89
1989/90	73.4	50.00	12/ —	13.1	—	—	14.6	25/0/0	89
1990/91	72.9	50.27	12/ —	—	—	—	—	12.5/0/0	—

1/ Includes planted area plus acres considered planted (ARP, PLD, 0-92 etc). Net of CRP. 2/ Percentage of base acres that farmers participating in Acreage Reduction Programs/Paid Land Diversion/PIK were required to devote to conserving uses to receive program benefits. 3/ Percentage of base acres enrolled in Acreage Reduction Programs/Paid Land Diversion/PIK. 4/ Percent of program yield, except 1986/87 wheat, which is dollars per bushel. 1984 PIK rates apply only to the 10-20 portion. 5/ Rates for payments received in cash were reduced by 4.3 percent in 1986/87 due to Gramm-Rudman-Hollings. 6/ Annual average world market price. 7/ Guaranteed to farmers signed up for 0/92. 8/ The sorghum, oats, & barley programs were the same as for corn in each year except 1988-90, when the oats ARP was lower than for the other feed grains. 9/ There are no target prices, acreage programs, or payment rates for soybeans. 10/ Soybean program data refers to percent of program crop base permitted to shift into beans without loss of base. 11/ Loan repayment rate. 12/ Loans may be repaid at the lower of the loan rate or world market price. \* On September 13, the Secretary announced that participating farmers have the option of planting up to 105 percent of their wheat base to boost 1990 supplies. For every acre planted in excess of 95 percent of base, the acreage used to compute deficiency payments will be cut by 1 acre. — = not available.

Information contact: James Cole (202) 786-1840.



Table 23.—Fruit

	1981	1982	1983	1984	1985	1986	1987	1988	1989 P
<b>Citrus 1/</b>									
Production (1,000 ton)	15,105	12,139	13,682	10,832	10,525	11,058	11,894	12,781	13,200
Per capita consumpt. (lbs.) 2/	104.4	109.3	120.0	102.8	109.1	117.3	112.8	113.8	—
<b>Noncitrus 3/</b>									
Production (1,000 tons)	13,332	14,859	14,154	14,291	14,189	13,918	18,011	15,872	18,090
Per capita consumpt. (lbs.) 2/	88.0	89.2	88.7	93.9	91.8	96.4	101.5	97.7	—
	1989					1990			
	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
<b>F.o.b. shipping point prices</b>									
Apples (\$/carton) 4/	9.55	11.31	10.49	8.31	—	9.00	8.83	11.00	11.00
Pears (\$/box) 5/	—	—	—	11.10	—	11.75	12.00	13.85	14.00
<b>Grower prices</b>									
Oranges (\$/box) 6/	5.04	3.91	5.82	6.22	6.47	5.63	4.70	4.93	5.33
Grapefruit (\$/box) 6/	4.62	5.63	6.10	8.18	5.54	5.18	4.62	4.68	6.23
<b>Stocks, ending</b>									
Fresh apples (mil. lbs.)	174.9	8.0	2,522.0	4,501.9	3,845.8	3,220.8	2,571.7	2,024.8	1,398.8
Fresh pears (mil. lbs.)	11.0	157.9	446.2	436.9	368.8	272.8	200.2	153.0	104.6
Frozen fruits (mil. lbs.)	722.5	850.3	863.9	955.1	909.3	805.2	727.9	661.7	814.4
Frozen orange juice (mil. lbs.)	1,140.0	946.9	808.4	693.1	667.7	749.6	926.6	1,041.5	1,088.9

1/ 1989 indicated 1988/89 season. 2/ Per capita consumption for total U.S. population, including military consumption of both fresh and processed fruit in fresh weight equivalent. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, carton tray pack, 125's. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 135's. 6/ U.S. equivalent on-tree returns. p = preliminary. — = not available.

Information contact: Wynne Napper (202) 786-1885.

Table 24.—Vegetables

	Calendar year									
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
<b>Production</b>										
Total vegetables (1,000 cwt)	395,225	392,343	430,795	403,320	457,394	453,771	461,329	488,470	477,729	543,748
Fresh (1,000 cwt) 1/ 3/	178,416	183,458	183,452	185,561	202,608	204,146	215,969	230,913	237,978	240,421
Processed (tons) 2/ 3/	10,760,440	10,444,330	11,867,170	10,887,950	12,739,280	12,481,240	12,268,020	12,877,850	11,987,580	15,166,340
Mushrooms (1,000 lbs.)	469,576	517,146	490,826	561,531	595,681	587,958	614,393	631,818	667,387	—
Potatoes (1,000 cwt)	303,805	340,823	355,131	333,726	362,039	406,808	361,743	389,320	358,438	370,344
Sweet potatoes (1,000 cwt)	10,953	12,799	14,833	12,083	12,902	14,573	12,368	11,611	10,945	11,499
Dry edible beans (1,000 cwt)	26,729	32,751	25,563	15,529	21,070	22,175	22,886	26,031	19,253	24,333
	1989					1990				
	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
<b>Shipments</b>										
Fresh (1,000 cwt) 4/	31,223	21,599	21,914	15,030	16,605	21,908	17,467	21,552	17,748	19,880
Potatoes (1,000 cwt)	9,891	8,468	10,678	9,005	9,612	12,839	10,389	13,096	10,758	12,095
Sweet potatoes (1,000 cwt)	20	19	187	288	333	789	451	301	255	251

1/ Includes fresh production of asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes. 2/ Includes processing production of snap beans, sweet corn, green peas, tomatoes, cucumbers (for pickles), asparagus, broccoli, carrots, & cauliflower. 3/ Asparagus & cucumber estimates were not available for 1982 & 1983. 4/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, & watermelons. — = not available.

Information contacts: Shannon Hamm or Cathy Greene (202) 786-1884.

Table 25.—Other Commodities

	Annual					1989				1990
	1985	1986	1987	1988	1989	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar
<b>Sugar</b>										
Production 1/	5,969	6,257	7,309	7,087	8,827	1,822	677	617	3,709	1,871
Deliveries 1/	8,035	7,786	8,187	8,188	8,309	1,902	2,056	2,181	2,190	1,968
Stocks, ending 1/	3,128	3,225	3,195	3,132	2,933	3,402	2,351	1,224	2,933	3,112
<b>Coffee</b>										
Composite green price N.Y. (cts./lb.)	137.48	185.18	109.14	115.59	95.17	126.67	118.01	72.29	83.70	73.22
Imports, green bean equiv. (mil. lbs.) 2/	2,550	2,596	2,838	2,072	2,630	586	535	784	725	885
	Annual			1988	1989					
	1988	1987	1988	Dec	July	Aug	Sept	Oct	Nov	Dec
<b>Tobacco</b>										
Prices at auctions 3/										
Flue-cured (\$/lb.)	1.52	1.59	1.81	—	—	—	1.74	1.70	1.58	—
Burley (\$/lb.)	1.60	1.56	1.81	1.82	—	—	—	—	1.87	1.68
Domestic consumption 4/										
Cigarettes (bil.)	584.0	575.0	562.5	39.5	26.8	47.2	44.4	48.2	50.0	34.4
Large cigare (mil.)	3,055	2,728	2,531	203.4	166.1	231.0	216.2	211.4	212.5	187.0

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year: July-June for flue-cured, Oct-Sept. for burley. 4/ Taxable removals. — = not available.

Information contacts: sugar, Peter Buzzanell (202) 786-1888, coffee, Fred Gray (202) 786-1888, tobacco, Verner Grise (202) 786-1890.

## World Agriculture

Table 26.—World Supply &amp; Utilization of Major Crops, Livestock, &amp; Products

	1984/85	1985/86	1986/87	1987/88	1988/89 P	1989/90 P	1990/91 F
Million units							
<b>Wheat</b>							
Area (hectares)	231.2	229.6	228.2	219.9	218.0 <sup>1</sup>	225.7	
Production (metric tons)	511.9	500.1	530.8	501.6	500.8 <sup>1</sup>	535.2	568.2
Exports (metric tons) 1/	107.0	85.0	90.7	105.0	98.9	97.4	101.0
Consumption (metric tons) 2/	493.0	498.2	522.5	530.6	531.2 <sup>3</sup>	538.3	553.4
Ending stocks (metric tons) 3/	164.0	168.3	178.4	147.5	117.0	113.9	128.7
<b>Coarse grains</b>							
Area (hectares)	334.6	341.3	337.3	323.6	325.5	323.7	
Production (metric tons)	815.8	842.7	833.7	792.1	728.5	798.5	819.9
Exports (metric tons) 1/	100.4	83.2	83.7	83.2	94.5	98.5	95.1
Consumption (metric tons) 2/	782.6	778.4	807.9	812.9	797.0	828.4	827.7
Ending stocks (metric tons) 3/	143.9	208.2	234.0	213.2	144.8	115.0	107.2
<b>Rice, milled</b>							
Area (hectares)	144.1	144.6	145.1	141.4	145.5	145.6	
Production (metric tons)	318.8	318.8	318.3	313.7	330.2	340.8	340.1
Exports (metric tons) 4/	11.4	12.8	12.9	11.9	15.2	13.0	13.3
Consumption (metric tons) 2/	310.6	319.5	322.8	319.7	328.1	334.5	340.0
Ending stocks (metric tons) 3/	54.9	54.9	50.8	44.9	46.9	53.3	53.4
<b>Total grains</b>							
Area (hectares)	709.9	715.5	710.8	684.9	689.0	695.0	
Production (metric tons)	1,646.5	1,661.6	1,682.8	1,607.4	1,559.5	1,674.5	1,728.2
Exports (metric tons) 1/	218.8	180.8	187.3	200.1	206.6	209.9	209.4
Consumption (metric tons) 2/	1,588.2	1,594.1	1,653.2	1,663.2	1,656.3	1,701.2	1,721.1
Ending stocks (metric tons) 3/	362.8	431.4	461.2	405.6	308.7	282.2	289.3
<b>Oilseeds</b>							
Crush (metric tons)	150.7	155.1	161.4	167.7	165.5	172.0	
Production (metric tons)	191.1	196.2	194.4	209.5	202.7	212.6	222.0
Exports (metric tons)	33.1	34.5	37.7	39.5	31.9	34.9	
Ending stocks (metric tons)	21.1	28.8	23.5	23.9	22.1	22.9	
<b>Meals</b>							
Production (metric tons)	101.8	105.0	110.5	115.1	112.9	117.1	
Exports (metric tons)	32.3	34.4	36.7	36.3	38.4	38.6	
<b>Oils</b>							
Production (metric tons)	48.2	49.4	50.3	53.1	53.6	56.2	
Exports (metric tons)	15.6	16.4	18.9	17.7	18.3	19.2	
<b>Cotton</b>							
Area (hectares)	33.9	31.9	29.9	31.1	34.0	32.9	
Production (bales)	88.2	79.6	70.4	81.2	84.8	79.9	88.0
Exports (bales)	20.2	20.2	26.0	23.1	25.8	24.8	25.0
Consumption (bales)	70.0	75.8	82.5	84.1	85.4	86.1	87.0
Ending stocks (bales)	42.4	47.2	35.2	32.5	31.0	24.8	25.5
	1984	1985	1986	1987	1988	1989 P	1990 F
<b>Red meat</b>							
Production (metric tons)	99.8	103.7	108.7	109.7	113.3	114.6	114.1
Consumption (metric tons)	97.8	101.6	105.4	107.9	111.5	113.0	112.2
Exports (metric tons) 1/	6.0	6.4	6.7	6.7	6.9	8.9	7.2
<b>Poultry</b>							
Production (metric tons)	25.2	26.2	27.4	29.3	30.2	31.3	32.7
Consumption (metric tons)	25.0	25.8	27.0	26.7	29.8	30.9	32.1
Exports (metric tons) 1/	1.3	1.2	1.3	1.5	1.7	1.7	1.8
<b>Dairy</b>							
Milk production (metric tons)	413.0	413.4	419.0	427.1	429.8	431.3	437.0

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1985 data correspond with 1984/85, etc. P = preliminary, F = forecast.

Information contacts: Crops, Frederic Suris (202) 786-1824; red meat & poultry, Linda Bailey (202) 786-1286; dairy, Sara Short (202) 786-1769.

# U.S. Agricultural Trade

## Table 27.—Prices of Principal U.S. Agricultural Trade Products

	Annual			1989				1990		
	1987	1988	1989	Mar	Oct	Nov	Dec	Jan	Feb	Mar
<b>Export commodities</b>										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	3.11	3.97	4.65	4.88	4.50	4.57	4.62	4.59	4.41	4.28
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	1.95	2.73	2.85	3.03	2.73	2.79	2.79	2.70	2.71	2.80
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	1.88	2.52	2.70	2.83	2.60	2.64	2.65	2.60	2.59	2.64
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	5.55	7.81	7.06	8.05	5.95	6.18	6.22	6.07	6.05	6.16
Soybean oil, Decatur (cts./lb.)	15.85	23.52	20.21	22.02	18.73	19.51	19.10	19.55	20.64	22.92
Soybean meal, Decatur (\$/ton)	175.57	234.75	216.59	235.70	191.93	183.76	179.82	171.06	161.80	164.34
Cotton, 8-market avg. spot (cts./lb.)	64.35	57.25	63.78	57.60	69.70	68.28	63.56	62.21	65.03	66.06
Tobacco, avg. price at auction (cts./lb.)	137.41	153.61	151.50	141.11	182.96	160.89	161.23	160.77	160.54	160.84
Rice, f.o.b. mill, Houston (\$/cwt)	13.15	19.60	15.68	15.00	16.50	16.00	15.67	15.50	15.69	16.25
Inedible tallow, Chicago (cts./lb.)	13.79	16.64	14.71	14.86	15.25	14.75	14.25	14.87	14.50	14.47
<b>Import commodities</b>										
Coffee, N.Y. spot (\$/lb.)	1.09	1.21	1.04	1.28	0.71	0.72	0.70	0.72	0.76	0.85
Rubber, N.Y. spot (cts./lb.)	50.65	59.20	50.65	56.69	46.08	45.64	44.82	44.72	45.75	45.91
Cocoa beans, N.Y. (\$/lb.)	0.87	0.69	0.55	0.84	0.46	0.44	0.42	0.44	0.45	0.50

Information contact: Mary Teymourian (202) 786-1824.

## Table 28.—Indexes of Real Trade-Weighted Dollar Exchange Rates<sup>1</sup>

	1989						1990			
	July	Aug	Sept P	Oct P	Nov P	Dec P	Jan P	Feb P	Mar P	Apr P
	1985 = 100									
Total U.S. trade 2/	72.0	72.8	73.9	71.7	71.0	69.4	67.8	67.3	68.8	67.9
Agricultural trade										
U.S. markets	79.5	80.9	81.5	79.9	79.9	78.8	78.4	78.1	79.4	79.1
U.S. competitors	86.8	85.8	85.3	83.8	82.4	84.0	79.9	80.1	80.5	80.2
Wheat										
U.S. markets	93.2	92.3	92.4	91.7	90.7	89.8	89.0	88.5	89.4	89.2
U.S. competitors 3/	86.2	84.3	83.6	81.8	80.4	84.6	79.6	80.5	80.5	80.2
Soybeans										
U.S. markets	72.2	72.9	73.8	72.0	71.8	70.3	69.7	69.4	71.0	70.6
U.S. competitors 3/	105.1	97.0	92.4	89.5	85.3	106.5	82.7	82.6	75.6	83.2
Corn										
U.S. markets	72.3	74.0	74.8	73.3	73.7	73.0	73.1	72.9	74.7	74.7
U.S. competitors 3/	99.4	94.7	92.5	89.0	86.4	101.0	84.9	84.7	85.5	84.9
Cotton										
U.S. markets	76.3	76.4	77.1	76.1	76.4	76.0	76.3	76.2	78.0	78.1
U.S. competitors	83.2	85.8	84.3	81.5	79.9	79.6	78.2	77.8	76.9	76.0

1/ Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of Agricultural Outlook for a discussion of the calculations and the weights used. 2/ Federal Reserve Board index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets. 3/ Substantial devaluations of the Argentine austral and Brazilian cruzado resulted in a sharp increase in the December, 1989, & subsequent values of these indices. P = preliminary.

Information contact: Tim Baxter, David Stallings (202) 786-1708.

## Table 29.—Trade Balance

	Fiscal year 1/								Feb
	1983	1984	1985	1986	1987	1988	1989 F	1990 F	1990
	\$ million								
<b>Exports</b>									
Agricultural	34,769	38,027	31,201	26,312	27,876	35,379	39,651	38,000	3,503
Nonagricultural	159,373	170,014	179,236	179,291	202,911	258,593	302,507	—	25,838
Total 2/	194,142	208,041	210,437	205,603	230,787	293,972	342,158	—	29,341
<b>Imports</b>									
Agricultural	16,373	18,916	19,740	20,884	20,650	21,014	21,479	21,000	1,991
Nonagricultural	230,527	297,736	313,722	342,846	367,374	409,138	441,072	—	34,784
Total 3/	246,900	316,652	333,462	363,730	388,024	430,152	462,551	—	36,775
<b>Trade balance</b>									
Agricultural	18,396	19,111	11,461	5,428	7,226	14,365	18,172	17,000	1,512
Nonagricultural	-71,154	-127,722	-134,486	-163,555	-164,483	-150,545	-138,565	—	-8,946
Total	-52,758	-108,611	-123,025	-158,127	-157,257	-136,180	-120,393	—	-7,434

1/ Fiscal years begin October 1 & end September 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. 2/ Domestic exports including Department of Defense shipments (F.A.S. value). 3/ Imports for consumption (customs value). F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 30.—U.S. Agricultural Exports &amp; Imports

	Fiscal year*			Feb	Fiscal year*			Feb
	1988	1989	1990 F	1990	1988	1989	1990 F	1990
	1,000 units				\$ million			
EXPORTS								
Animals, live (no.) 1/	430	758	—	54	452	475	—	19
Meats & preps., excl. poultry (mt)	631	889	0	66	1,797	2,355	—	197
Dairy products (mt)	388	594	—	11	536	475	800	31
Poultry meats (mt)	390	466	500	53	424	514	—	58
Fats, oils, & greases (mt)	1,362	1,377	3/1,400	84	545	531	—	32
Hides & skins incl. furskins	—	—	—	—	1,837	1,713	—	14
Cattle hides, whole (no.) 1/	20,817	26,260	—	1,931	1,458	1,360	—	105
Mink pelts (no.) 1/	2,455	3,073	—	688	88	91	—	15
Grains & feeds (mt)	108,944	114,978	—	9,080	12,569	16,837	4/15,600	1,278
Wheat (mt)	40,517	37,702	33,000	2,388	4,469	6,008	5/5,400	385
Wheat flour (mt)	1,236	1,268	1,300	81	170	266	—	15
Rice (mt)	2,173	3,052	2,500	202	731	955	800	68
Feed grains, incl. products (mt)	53,117	61,094	63,500	5,549	5,193	7,379	6,700	634
Feeds & fodders (mt)	11,255	11,071	6/11,400	823	1,720	1,848	—	136
Other grain products (mt)	910	1,187	—	91	362	513	—	48
Fruits, nuts, and preps. (mt)	2,409	2,555	—	208	2,368	2,394	—	187
Fruit juices incl.	—	—	—	—	—	—	—	—
froz. (1,000 hectoliters) 1/	5,497	4,997	—	455	252	264	—	29
Vegetables & preps. (mt)	1,821	2,482	—	185	1,280	1,546	—	172
Tobacco, unmanufactured (mt)	229	212	200	24	1,297	1,274	1,300	146
Cotton, excl. linters (mt)	1,388	1,441	1,700	173	2,136	2,039	2,700	281
Seeds (mt)	288	514	—	56	415	500	500	69
Sugar, cane or beet (mt)	318	368	—	45	98	134	—	18
Oilseeds & products (mt)	29,688	21,090	—	2,704	7,758	6,824	5,600	661
Oilseeds (mt)	21,601	14,775	—	2,078	5,295	4,400	—	482
Soybeans (mt)	21,142	14,088	15,600	2,039	5,066	4,079	3,400	457
Protein meal (mt)	6,389	4,816	4,600	513	1,501	1,317	900	113
Vegetable oils (mt)	1,699	1,498	—	114	962	908	—	66
Essential oils (mt)	9	13	—	1	120	171	—	18
Other	810	612	—	289	1,495	1,805	—	168
Total	148,473	147,569	145,500	12,979	35,379	39,651	38,000	3,503
IMPORTS								
Animals, live (no.) 1/	2,238	2,484	—	281	729	740	700	96
Meats & preps., excl. poultry (mt)	1,280	1,092	—	90	2,788	2,433	—	229
Beef & veal (mt)	779	668	685	62	1,681	1,527	1,600	157
Pork (mt)	456	371	370	25	1,001	778	800	63
Dairy products (mt)	232	211	300	17	881	834	800	64
Poultry & products 1/	—	—	—	—	97	130	—	10
Fats, oils, & greases (mt)	20	14	—	1	19	14	—	1
Hides & skins, incl. furskins 1/	—	—	—	—	247	240	—	14
Wool, unmanufactured (mt)	66	62	—	6	292	319	—	21
Grains & feeds (mt)	3,075	3,468	3,200	234	868	1,139	1,100	83
Fruits, nuts, & preps., excl. juices (mt)	4,797	5,036	4,915	477	2,169	2,289	—	236
Bananas & plantains (mt)	3,030	3,039	3,050	218	820	851	800	65
Fruit juices (1,000 hectoliters) 1/	26,758	27,778	27,000	3,180	768	793	—	105
Vegetables & preps. (mt)	2,518	2,953	2,700	302	1,593	1,959	1,900	337
Tobacco, unmanufactured (mt)	217	169	280	13	611	521	500	41
Cotton, unmanufactured (mt)	36	13	—	2	9	8	—	1
Seeds (mt)	143	158	160	23	153	187	200	15
Nursery stock & cut flowers 1/	—	—	—	—	419	466	—	49
Sugar, cane or beet (mt)	1,078	1,630	—	182	372	620	—	70
Oilseeds & products (mt)	1,772	1,917	1,900	179	838	946	900	77
Oilseeds (mt)	208	424	—	41	71	159	—	18
Protein meal (mt)	253	359	—	22	42	65	—	3
Vegetable oils (mt)	1,311	1,133	—	116	725	721	—	56
Beverages excl. fruit juices (1,000 hectoliters) 1/	15,583	13,967	—	895	2,008	1,815	—	111
Coffee, tea, cocoa, spices	1,841	1,868	—	192	4,274	3,898	—	287
Coffee, incl. products (mt)	1,050	1,084	1,200	123	2,600	2,467	2,300	187
Cocoa beans & products (mt)	562	564	550	53	1,164	969	900	74
Rubber & allied gums (mt)	846	927	850	59	949	1,051	1,000	52
Other	—	—	—	—	931	1,097	—	91
Total	—	—	—	—	21,014	21,479	21,000	1,991

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. 1/ Not included in total volume. 2/ Forecasts for footnoted items 2/-6/ are based on slightly different groups of commodities. Fiscal 1988 exports of categories used in the 1989 forecasts were 2/ 561,000 m. tons. 3/ 1,347 million dollars. 4/ 12,743 million. 5/ 4,638 million, i.e. includes flour. 6/ 11,095 million m. tons. F = forecast -- = not available.

Information contact: Stephen MacDonald (202) 786-1822.



Table 31.—U.S. Agricultural Exports by Region

Region & country	Fiscal year *			Feb 1990	Change from year * earlier			Feb 1990
	1988	1989	1990 F		1988	1989	1990 F	
	\$ million				Percent			
<b>WESTERN EUROPE</b>	8,053	7,087	8,000	704	12	-12	-7	-1
European Community (EC-12)	7,538	6,558	8,100	668	11	-13	-8	0
Belgium-Luxembourg	429	431	—	42	1	1	—	93
France	563	474	—	57	14	-18	—	55
Germany, Fed. Rep.	1,315	918	—	84	4	-30	—	-17
Italy	713	803	—	69	-3	-16	—	-1
Netherlands	2,103	1,847	—	149	8	-12	—	-17
United Kingdom	818	738	—	44	23	-10	—	-14
Portugal	340	307	—	51	25	-10	—	90
Spain, incl. Canary Islands	848	876	—	123	29	3	—	-16
Other Western Europe	516	510	500	36	20	-1	0	-14
Switzerland	191	166	—	17	32	-13	—	4
<b>EASTERN EUROPE</b>	559	422	500	88	23	-24	-25	197
German Dem. Rep.	67	72	—	10	0	8	—	74
Poland	167	45	—	1	165	-73	—	-54
Yugoslavia	104	76	—	50	-21	-26	—	2,840
Romania	93	62	—	24	-19	-33	—	984
<b>USSR</b>	1,940	3,299	3,200	319	194	70	-3	-23
<b>ASIA</b>	15,944	18,685	19,200	1,541	33	17	-3	3
West Asia (Mideast)	1,904	2,270	2,200	206	14	19	-4	5
Turkey	120	238	—	28	3	97	—	-7
Iraq	735	791	900	43	39	8	12	-47
Israel	334	285	—	47	37	-21	—	41
Saudi Arabia	464	482	500	38	-5	4	0	35
South Asia	805	1,171	—	61	133	45	—	22
Bangladesh	107	213	—	5	-3	98	—	-45
India	354	243	—	4	281	-31	—	-69
Pakistan	276	609	400	42	181	121	67	105
China	613	1,494	1,200	77	161	144	-20	-47
Japan	7,274	8,152	8,200	728	31	12	0	12
Southeast Asia	1,022	974	—	110	44	-5	—	25
Indonesia	245	216	—	16	61	-12	—	-20
Philippines	345	344	400	27	33	0	33	20
Other East Asia	4,328	4,623	4,500	358	24	7	-2	-4
Taiwan	1,577	1,594	1,600	82	16	1	-6	-37
Korea, Rep.	2,259	2,453	2,500	218	33	9	0	28
Hong Kong	488	575	600	48	12	18	0	-11
<b>AFRICA</b>	2,272	2,281	2,300	124	27	0	0	-35
North Africa	1,659	1,798	1,800	89	30	8	0	-48
Morocco	193	218	—	5	-2	12	—	-88
Algeria	537	549	600	45	120	2	20	294
Egypt	786	955	900	36	3	21	-10	-70
Sub-Saharan	613	483	500	35	21	-21	0	79
Nigeria	44	30	—	4	-35	-31	—	226
Rep. S. Africa	85	57	—	1	74	-34	—	-13
<b>LATIN AMERICA &amp; CARIBBEAN</b>	4,401	5,442	5,100	398	17	24	-6	-11
Brazil	176	152	600	6	-58	-13	0	35
Caribbean Islands	867	1,007	—	93	5	16	—	23
Central America	414	448	—	27	10	9	—	-9
Colombia	179	139	—	4	55	-22	—	-44
Mexico	1,726	2,757	2,400	208	42	60	-14	0
Peru	174	81	—	18	24	-54	—	1,432
Venezuela	597	587	600	27	30	-2	-17	-71
<b>CANADA</b>	1,973	2,187	2,200	309	11	11	0	90
<b>OCEANIA</b>	237	268	300	22	3	13	0	14
<b>Total</b>	35,379	39,651	38,000	3,503	27	12	-4	1
Developed countries	17,905	18,000	17,500	1,810	19	1	-3	15
Less developed countries	14,362	16,436	15,600	1,211	25	14	-5	-8
Centrally planned countries	3,111	5,215	4,900	483	131	68	-6	-18

\* Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. F = forecast. — = not available.  
 Note: Adjusted for transshipments through Canada.

Information contact: Stephen MacDonald (202) 796-1822.

## Farm Income

Table 32.—Farm Income Statistics

	Calendar year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ billion										
1. Farm receipts	142.0	144.1	147.1	141.1	146.8	149.1	140.8	145.3	157.2	163	167 to 172
Crops (incl. net CCC loans)	71.7	72.5	72.3	67.1	69.5	74.3	64.0	63.8	72.6	74	78 to 82
Livestock	68.0	69.2	70.3	69.4	73.0	69.8	71.5	75.7	78.9	83	83 to 85
Farm related 1/	2.3	2.5	4.5	4.5	4.4	5.0	5.1	5.8	5.7	6	5 to 7
2. Direct Government payments	1.3	1.9	3.5	9.3	8.4	7.7	11.8	16.7	14.5	11	8 to 10
Cash payments	1.3	1.9	3.5	4.1	4.0	7.6	8.1	8.8	7.1	9	7 to 9
Value of PiK commodities	0.0	0.0	0.0	5.2	4.5	0.1	3.7	10.1	7.4	2	1 to 2
3. Total gross farm income (4+5+6) 2/	149.3	166.4	163.5	153.1	174.9	166.4	160.4	171.8	177.6	192	188 to 194
4. Gross cash income (1+2)	143.3	148.0	150.6	150.4	155.2	156.9	152.5	162.0	171.6	174	176 to 182
5. Nonmoney income 3/	12.3	13.8	14.3	13.5	13.4	11.8	10.6	10.0	10.3	10	9 to 11
6. Value of inventory change	-6.3	6.5	-1.4	-10.9	6.3	-2.4	-2.7	-0.4	-4.3	7	1 to 3
7. Cash expenses 4/	109.1	113.2	112.8	113.5	116.6	110.2	100.7	107.5	114.4	121	121 to 123
8. Total expenses	133.1	139.4	140.0	140.4	142.7	134.0	122.4	128.0	135.0	143	142 to 146
9. Net cash income (4-7)	34.2	32.8	37.8	38.9	38.8	46.7	51.8	54.5	57.2	53	54 to 58
10. Net farm income (3-8)	16.1	26.9	23.5	12.7	32.2	32.4	38.0	43.8	42.7	49	45 to 49
Deflated (1982\$)	18.8	28.6	23.5	12.2	29.9	29.2	33.4	37.2	35.2	39	34 to 38
11. Off-farm income	34.7	35.8	36.4	37.0	38.9	42.6	44.8	46.8	51.7	54	52 to 62
12. Loan changes 5/: Real estate	9.9	9.1	3.8	2.3	-1.1	-6.0	-9.0	-7.5	-4.4	-2	-1 to 1
13.   5/: Non-real estate	5.3	6.5	3.4	0.9	-0.8	-9.8	-11.0	-4.6	-0.3	-1	0 to 3
14. Rental income plus monetary change	6.1	6.4	6.3	5.3	8.9	8.8	7.8	6.8	8.5	8	7 to 9
15. Capital expenditures 5/	18.0	16.8	13.3	12.7	12.5	9.2	8.6	9.8	10.2	12	10 to 14
16. Net cash flow (9+12+13+14-15)	37.6	37.8	38.1	32.7	33.1	30.7	31.2	39.4	50.8	47	50 to 58

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, & farm household expenses. 1987 & 1988 expenses include preliminary revisions from the 1987 Census of Agriculture. 5/ Excludes farm households. Totals may not add because of rounding. F = forecast.

Information contact: Diane Bertelsen (202) 786-1808.

Table 33.—Balance Sheet of the U.S. Farming Sector

	Calendar year 1/ 2/										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ billion										
<b>Assets</b>											
Real estate	782.4	784.7	748.8	738.7	837.7	555.9	507.3	577.0	607.9	648	675 to 685
Non-real estate	213.2	212.0	212.2	205.6	209.0	190.5	182.2	187.8	202.5	201	200 to 210
Livestock & poultry	60.6	53.5	53.0	49.7	49.6	46.3	47.6	57.9	65.7	67	66 to 70
Machinery & motor vehicles	93.1	101.4	102.0	100.8	96.9	87.6	80.3	73.9	74.7	76	75 to 79
Crops stored 3/	33.0	29.1	27.7	23.9	29.7	23.6	19.1	20.9	26.2	22	19 to 23
Financial assets	26.5	28.0	29.5	31.3	32.8	33.0	35.2	35.2	35.9	36	36 to 38
Total farm assets	995.6	996.7	961.0	944.3	846.7	746.4	689.5	764.9	810.4	849	880 to 890
<b>Liabilities</b>											
Real estate debt 4/	89.6	98.7	102.5	104.8	103.6	97.6	88.6	81.1	76.7	75	73 to 77
Non-real estate debt 5/	77.1	83.6	87.0	87.9	87.1	77.5	66.6	62.0	61.7	61	60 to 64
Total farm debt	166.8	182.3	189.5	192.7	190.7	175.1	155.1	143.1	138.4	136	134 to 140
Total farm equity	828.9	814.4	771.5	751.6	656.0	571.3	534.4	621.8	672.0	713	740 to 750
	Percent										
<b>Selected ratios</b>											
Debt-to-assets	16.8	18.3	19.7	20.4	22.5	23.5	22.5	18.7	17.1	16	15 to 16
Debt-to-equity	20.1	22.4	24.6	25.6	29.1	30.6	29.0	23.0	20.6	19	18 to 19
Debt-to-net cash income	488	556	497	623	493	375	299	248	231	256	240 to 250

1/ As of Dec. 31. 2/ Estimates of farm assets and equity for 1987-1990 reflect revisions in real estate assets based on the 1987 Census of Agriculture. Revisions in real estate assets for 1983-1988 have not been completed. 3/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 4/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 5/ Excludes debt for nonfarm purposes. F = forecast.

Information contact: Ken Erickson or Jim Ryan (202) 786-1798.

Table 34.—Cash Receipts From Farm Marketings, by State

Region & State	Livestock & products				Crops 1/				Total 1/			
	1988	1989	Jan 1990	Feb 1990	1988	1989	Jan 1990	Feb 1990	1988	1989	Jan 1990	Feb 1990
	\$ million 2/											
<b>NORTH ATLANTIC</b>												
Maine	218	223	20	17	188	234	24	25	404	457	44	41
New Hampshire	60	60	8	5	77	77	5	5	137	138	11	10
Vermont	352	375	37	33	53	72	3	2	405	428	39	36
Massachusetts	105	105	9	9	297	303	20	11	402	408	29	20
Rhode Island	13	13	1	1	65	66	3	3	78	79	4	4
Connecticut	180	183	15	14	202	217	34	12	382	400	49	26
New York	1,781	1,917	179	153	824	782	50	41	2,605	2,699	228	194
New Jersey	192	192	17	16	450	435	21	19	642	627	38	35
Pennsylvania	2,348	2,566	227	210	935	977	101	75	3,284	3,542	328	285
<b>NORTH CENTRAL</b>												
Ohio	1,804	1,747	159	146	2,025	2,028	194	116	3,829	3,775	353	262
Indiana	1,749	1,888	189	149	2,367	2,483	239	142	4,117	4,372	409	292
Illinois	2,243	2,310	189	175	4,218	4,488	704	320	6,461	6,798	893	494
Michigan	1,208	1,293	118	106	1,464	1,592	128	94	2,670	2,885	245	199
Wisconsin	4,281	4,573	414	367	767	909	67	43	5,048	5,481	481	409
Minnesota	3,364	3,629	349	305	2,743	2,863	345	98	6,107	6,492	694	404
Iowa	5,045	5,181	548	452	4,029	3,982	539	182	9,074	9,164	1,087	834
Missouri	2,011	2,152	230	165	1,814	1,750	182	81	3,828	3,903	412	246
North Dakota	849	871	82	53	1,574	1,467	105	83	2,423	2,338	187	137
South Dakota	1,965	2,019	193	163	945	907	81	46	2,911	2,926	274	210
Nebraska	5,336	5,562	597	535	2,643	2,909	333	172	7,979	8,470	840	707
Kansas	4,265	4,498	659	594	2,329	2,107	200	98	6,594	6,605	859	692
<b>SOUTHERN</b>												
Delaware	444	499	43	40	149	159	5	7	592	658	48	47
Maryland	768	828	77	73	459	483	25	23	1,228	1,311	102	96
Virginia	1,294	1,404	112	97	592	598	36	25	1,886	2,000	148	122
West Virginia	179	179	18	15	70	81	5	4	248	240	23	19
North Carolina	2,179	2,350	199	187	1,994	2,026	63	38	4,173	4,377	263	225
South Carolina	488	501	49	40	590	591	32	17	1,078	1,092	81	57
Georgia	2,011	2,184	187	174	1,533	1,554	61	43	3,544	3,738	248	217
Florida	1,114	1,182	107	95	4,897	4,285	531	408	5,811	5,467	638	503
Kentucky	1,538	1,601	151	93	992	1,111	279	70	2,530	2,711	430	163
Tennessee	1,080	1,110	101	81	965	912	89	39	2,046	2,022	190	120
Alabama	1,695	1,666	161	155	706	701	51	23	2,400	2,368	212	179
Mississippi	1,178	1,275	111	100	1,184	1,054	98	44	2,341	2,330	209	144
Arkansas	2,278	2,494	212	184	1,696	1,531	127	42	3,974	4,025	339	226
Louisiana	587	596	41	39	1,299	1,090	114	41	1,885	1,885	155	81
Oklahoma	2,284	2,428	196	132	1,127	1,154	101	36	3,410	3,582	298	187
Texas	6,498	6,792	543	535	3,783	4,099	330	211	10,281	10,892	873	746
<b>WESTERN</b>												
Montana	818	853	69	67	570	693	89	53	1,388	1,548	158	120
Idaho	1,033	1,097	98	89	1,258	1,642	133	90	2,291	2,739	232	179
Wyoming	575	618	47	37	158	170	9	7	730	788	57	44
Colorado	2,855	2,747	217	228	1,037	1,265	109	64	3,892	4,013	328	290
New Mexico	910	924	62	43	362	413	25	14	1,272	1,337	87	58
Arizona	793	718	77	82	1,187	1,125	99	42	1,959	1,842	178	124
Utah	537	555	47	40	150	156	13	9	687	711	60	49
Nevada	150	151	12	12	79	67	8	7	229	238	19	19
Washington	1,141	1,211	126	114	2,146	2,309	203	128	3,287	3,520	329	241
Oregon	669	698	64	49	1,427	1,523	89	71	2,096	2,221	153	120
California	4,704	5,470	448	392	11,894	12,251	817	657	16,598	17,721	1,065	1,049
Alaska	10	10	1	1	20	21	1	1	30	31	2	2
Hawaii	89	89	8	7	479	454	39	35	568	542	47	43
<b>UNITED STATES</b>	<b>78,862</b>	<b>83,786</b>	<b>7,713</b>	<b>6,869</b>	<b>72,569</b>	<b>74,142</b>	<b>6,759</b>	<b>3,919</b>	<b>151,431</b>	<b>157,928</b>	<b>14,472</b>	<b>10,788</b>

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 786-1804.

Table 35.—Cash Receipts From Farming

	Annual						1988				1990	
	1984	1985	1986	1987	1988	1989	Feb	Oct	Nov	Dec	Jan	Feb
	\$ million											
Farm marketings & CCC loans*	142,439	144,135	135,539	139,468	151,431	157,928	10,814	18,258	16,800	13,730	14,472	10,788
Livestock & products	72,988	69,845	71,534	75,717	78,862	83,786	8,727	8,071	7,817	6,846	7,713	6,869
Meat animals	40,832	38,589	39,122	44,276	45,975	47,675	4,124	5,085	4,519	3,617	4,440	3,969
Dairy products	17,944	18,063	17,763	17,710	17,688	19,338	1,435	1,683	1,770	1,620	1,827	1,591
Poultry & eggs	12,223	11,211	12,661	11,480	12,864	14,471	1,031	1,153	1,210	1,164	1,269	1,167
Other	1,999	1,982	1,997	2,252	2,354	2,302	137	150	309	145	176	142
Crops	69,471	74,290	64,005	63,751	72,589	74,142	4,087	10,187	8,783	6,883	6,759	3,919
Food grains	9,740	8,993	5,838	5,581	7,700	8,114	306	714	650	579	659	348
Feed crops	15,668	22,520	17,181	13,102	15,291	16,781	673	2,258	1,848	1,696	1,973	1,073
Cotton (lint & seed)	3,674	3,687	3,605	4,087	4,668	5,027	584	788	1,115	828	407	189
Tobacco	2,813	2,722	1,918	1,827	2,039	2,153	35	368	311	184	291	42
Oil-bearing crops	13,641	12,474	10,571	11,159	13,899	12,211	492	2,982	1,713	1,071	1,401	435
Vegetables & melons	9,138	8,558	8,826	9,716	9,819	10,458	617	1,133	559	489	722	682
Fruits & tree nuts	6,733	6,957	7,246	8,257	8,877	8,757	616	1,038	1,054	828	561	419
Other	8,065	8,381	9,041	10,020	10,478	10,842	666	908	1,633	1,209	745	730
Government payments	8,430	7,704	11,813	16,747	14,480	9,499	2,277	959	926	563	382	1,017
Total	160,869	161,839	147,352	156,215	165,911	167,427	13,091	19,217	17,526	14,293	14,854	11,805

\* Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 786-1804.

Table 36.—Farm Production Expenses

	Calendar year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ million										
Feed	20,971	20,855	18,592	21,725	19,652	18,015	16,179	18,898	22,462	24,000	20,000 to 23,000
Livestock	10,670	8,999	9,684	8,814	9,498	8,958	9,744	11,845	12,812	13,000	12,000 to 15,000
Seed	3,220	3,428	3,172	2,993	3,448	3,350	2,984	3,009	3,138	4,000	3,000 to 5,000
Farm-origin inputs	34,861	33,282	31,448	33,532	32,798	30,323	28,907	33,752	38,412	41,000	37,000 to 41,000
Fertilizer	9,491	9,409	8,018	7,067	7,429	7,258	5,787	6,210	7,000	8,000	7,000 to 9,000
Fuels & oils	7,879	8,570	7,886	7,503	7,143	6,584	4,790	5,042	5,144	6,000	5,000 to 7,000
Electricity	1,526	1,747	2,041	2,146	2,166	2,150	1,942	2,393	2,572	3,000	2,000 to 3,000
Pesticides	3,539	4,201	4,282	4,154	4,767	4,994	4,484	4,588	4,716	5,000	6,000 to 8,000
Manufactured inputs	22,435	23,927	22,229	20,870	21,505	20,986	17,003	18,233	19,432	22,000	22,000 to 24,000
Short-term interest	8,717	10,722	11,349	10,616	10,396	8,821	7,795	7,305	7,287	8,000	7,000 to 9,000
Real estate interest 1/	7,544	9,142	10,481	10,815	10,733	9,878	9,131	8,187	7,885	7,000	6,000 to 8,000
Total interest charges	16,261	19,864	21,830	21,430	21,129	18,699	16,926	15,492	15,172	15,000	14,000 to 16,000
Repair & maintenance 1/ 2/	7,076	7,021	6,428	6,529	6,416	6,370	6,426	6,546	6,858	7,000	7,000 to 8,000
Contract & hired labor	9,293	8,931	10,076	9,725	9,729	9,799	9,890	10,821	11,202	11,000	11,000 to 12,000
Machine hire & custom work	1,823	1,984	2,025	1,896	2,170	2,184	1,810	1,956	2,171	2,000	2,000 to 3,000
Marketing, storage, & transportation	3,070	3,523	4,301	3,904	4,012	4,127	3,652	3,823	3,279	4,000	4,000 to 5,000
Misc. operating expenses 1/	6,881	6,909	7,262	9,089	9,106	8,232	7,993	8,306	8,809	9,000	8,000 to 10,000
Other operating expenses	28,142	28,368	30,089	31,143	31,433	30,712	29,771	31,452	32,319	34,000	33,000 to 37,000
Capital consumption 1/	21,474	23,573	24,287	23,873	23,105	20,847	18,918	17,664	17,722	18,000	18,000 to 20,000
Taxes 1/	3,891	4,246	4,036	4,469	4,059	4,231	4,125	4,345	4,378	4,000	4,000 to 5,000
Net rent to nonoperator landlord	6,075	6,184	6,059	5,060	6,640	6,158	6,737	7,080	7,527	8,000	8,000 to 9,000
Other overhead expenses	31,440	34,003	34,381	33,402	35,804	33,238	29,780	29,069	29,627	31,000	31,000 to 34,000
Total production expenses	133,139	139,444	139,980	140,377	142,669	133,958	122,387	127,998	134,963	143,000	142,000 to 146,000

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses include other livestock purchases & dairy assessments. Totals may not add because of rounding. F = forecast. 1987 and 1988 expenses include preliminary revisions from the Census of Agriculture.

Information contacts: Chris McGath (202) 786-1804, Diane Bertelsen (202) 786-1808.



Table 37.—CCC Net Outlays by Commodity &amp; Function

COMMODITY/PROGRAM	Fiscal year									
	1982	1983	1984	1985	1986	1987	1988	1989	1990 E	1991 E
	\$ million									
Feed grains	5,397	6,915	-758	5,211	12,211	13,967	9,053	3,384	4,270	6,099
Wheat	2,238	3,419	2,536	4,691	3,440	2,836	678	53	522	2,061
Rice	164	664	333	990	947	906	128	631	616	673
Upland cotton	1,190	1,383	244	1,553	2,142	1,786	666	1,461	-242	710
Tobacco	103	880	346	455	253	-346	-453	-367	-307	-138
Dairy	2,182	2,528	1,502	2,065	2,337	1,166	1,295	679	483	617
Soybeans	169	288	-585	711	1,597	-476	-1,676	-86	236	52
Peanuts	12	-6	1	12	32	8	7	13	-6	3
Sugar	-5	49	10	184	214	-65	-246	-25	0	0
Honey	27	48	90	81	89	73	100	42	69	44
Wool	54	94	132	109	123	152	1/ 5	93	121	120
Operating expense 3/	294	328	362	348	457	535	614	620	626	633
Interest expenditure	-13	3,525	1,064	1,435	1,411	1,219	395	65	609	262
Export programs 4/	65	398	743	134	102	276	200	-102	102	67
1989/90 Disaster/ Livestock Assistance	0	0	0	0	0	0	0	3,919	2/ 96	0
Other	-225	-1542	1,295	-314	486	371	1,695	143	979	536
Total	11,652	18,851	7,315	17,683	25,841	22,408	12,461	10,523	8,174	11,739
FUNCTION										
Price-support loans (net)	7,015	8,438	-27	6,272	13,628	12,199	4,579	-926	431	704
Direct payments										
Deficiency	1,185	2,780	612	6,302	6,166	4,833	3,971	5,798	4,520	8,445
Diversion	0	705	1,504	1,525	64	382	8	-1	0	0
Dairy termination	0	0	0	0	489	587	260	168	178	106
Other	0	0	0	0	27	60	0	42	4	6
Disaster	306	115	1	0	0	0	6	4	0	0
Total direct payments	1,491	3,600	2,117	7,827	6,746	5,862	4,245	6,011	4,702	8,557
1988/89 crop disaster	0	0	0	0	0	0	0	3,386	2/ 6	0
Emergency livestock/ forage assistance	16	0	0	0	0	0	31	533	90	0
Purchases (net)	2,031	2,540	1,470	1,331	1,670	-479	-1,131	116	-87	238
Producer storage payments	679	964	268	329	485	832	658	174	127	70
Processing, storage, & transportation	355	665	639	657	1,013	1,659	1,113	659	465	490
Operating expense 3/	294	328	362	348	457	535	614	620	626	633
Interest expenditure	-13	3,525	1,064	1,435	1,411	1,219	395	65	609	262
Export programs 4/	65	398	743	134	102	276	200	-102	102	67
Other	-281	-1,607	679	-648	329	305	1,757	-13	1,103	718
Total	11,652	18,851	7,315	17,683	25,841	22,408	12,461	10,523	8,174	11,739

1/ Fiscal 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$126,108,000, which was recorded as a wool program receipt by Treasury. 2/ Benefits to farmers under the Disaster Assistance Act of 1989 are being paid in generic certificates & are not recorded directly as disaster assistance outlays. 3/ Does not include CCC Transfers to General Sales Manager. 4/ Includes Export Guarantee Program, Direct Export Credit Program, & CCC Transfers to the General Sales Manager. E = Estimated in the fiscal 1991 President's Budget. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdalecki (202) 447-5148.

## Food Expenditures

**Table 38.—Food Expenditure Estimates**

	Annual			1990			1990 year-to-date		
	1987 R	1988 R	1989 R	Jan	Feb P	Mar P	Jan	Feb P	Mar P
\$ billion									
Sales 1/ Off-premise use 2/ Meals & snacks 3/	242.1 182.0	255.1 196.4	271.6 208.0	22.1 16.2	21.1 16.0	23.9 18.1	22.1 18.2	43.3 32.1	67.2 50.2
1989 billion									
Sales 1/ Off-premise use 2/ Meals & snacks 3/	268.7 198.2	271.7 205.4	271.5 208.0	21.4 15.8	20.4 15.5	22.8 17.5	21.4 15.9	41.7 31.4	64.6 48.8
Percent change from year earlier (\$ bil.)									
Sales 1/ Off-premise use 2/ Meals & snacks 3/	3.2 10.9	5.4 5.2	6.5 6.4	6.3 2.4	5.5 6.5	6.1 5.4	6.3 2.4	5.9 4.4	6.0 4.8
Percent change from year earlier (1989 \$ bil.)									
Sales 1/ Off-premise use 2/ Meals & snacks 3/	-1.1 6.6	1.1 3.6	-0.1 1.3	-1.7 -2.0	-2.5 -1.8	-1.3 0.5	-1.7 -2.0	-2.1 -0.1	-1.8 0.1

1/ Food only (excludes alcoholic beverages). Not seasonally adjusted. 2/ Excludes donations & home production. 3/ Excludes donations, child nutrition subsidies, & meals furnished to employees, patients, & inmates. R = revised. P = preliminary.

NOTE: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food not alcoholic beverages & pet food, which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced & consumed on farms & food furnished to employees; (4) this series includes all sales of meals & snacks. PCE includes only purchases using personal funds, excluding business travel & entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," Agr.-Econ. Rpt. No. 575, Aug 1987.

Information contact: Aiden Manchester (202) 786-1880.

## Transportation

**Table 39.—Rail Rates; Grain & Fruit/Vegetable Shipments**

	Annual			1989				1990		
	1987	1988	1989	Mar	Oct	Nov	Dec	Jan	Feb	Mar
Rail freight rate index 1/ (Dec. 1984=100)										
All products	100.1	104.8	106.4	105.9	108.8	108.9	106.9 P	107.1 P	107.1 P	107.1 P
Farm products	99.3	105.6	108.4	108.6	108.2	108.4	108.5 P	109.1 P	108.8 P	109.1 P
Grain	98.7	105.4	108.7	108.8	108.6	108.7	108.7 P	109.2 P	109.0 P	109.2 P
Food products	98.6	103.2	103.9	103.7	104.1	104.2	104.3 P	105.8 P	105.0 P	105.0 P
Grain shipments										
Rail carloadings (1,000 cars) 2/	29.0	30.7	28.4	31.4	28.9 P	31.7 P	29.4 P	32.7 P	32.4 P	29.5 P
Fresh fruit & vegetable shipments										
Piggy back (1,000 cwt) 3/ 4/	588	535	505	370	406	440	459	466	453	370
Rail (1,000 cwt) 3/ 4/	630	607	593	572	472	584	725	704	684	572
Truck (1,000 cwt) 3/ 4/	9,137	9,679	9,682	8,738	9,040	9,424	9,278	7,698	7,776	8,738
Cost of operating trucks hauling produce 5/										
Owner operator (cts./mile)	116.3	118.7	124.1	122.9	125.5	126.2	128.9	128.9	127.5	127.0
Fleet operation (cts./mile)	119.5	118.4	123.4	121.9	124.5	125.5	128.7	128.7	127.5	126.5

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Weekly average; from Agricultural Marketing Service, USDA. 4/ Preliminary data for 1989 & 1990. 5/ Office of Transportation, USDA. P = preliminary.

Information contact: T.Q. Hutchinson (202) 786-1840.

## Indicators of Farm Productivity

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### Table 40.—Indexes of Farm Production Input Use & Productivity

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(See the March 1990 Issue.)

Information contact: Jim Hauver (202) 786-1459.

## Food Supply and Use

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### Table 41.—Per Capita Consumption of Major Food Commodities

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(See the January-February 1990 Issue.)

Information contact: Judy Putnam (202) 786-1870.

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☐ Master Card ☐ VISA Total charges \$\_\_\_\_\_

Credit card  
number:

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Credit card  
expiration date:

Month/Year

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ATTACH MAILING LABEL HERE

**For fastest service, call toll free, 1-800-999-6779 (8:30-5:00 ET)**